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HISTORY OF INDIAN MEDICINE

HISTORY OF INDIAN MEDICINE

**Containing Notices, Biographical and Bibliographical, of the
Āyurvedic Physicians and their Works on Medicine**

From the Earliest Ages to the Present Time

By

GIRINDRANĀTH MUKHOPĀDHYĀYA, BHISAGĀCĀRYA

B.A., M.D., F.A.S.B

With a Foreward

by

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Vice-Chancellor, Calcutta University

Griffith Prize Essay for 1911

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The Memory
of
My Mother**

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FOREWORD

An adequate history of Indian Medicine has yet to be written, though the importance of the subject has been acknowledged by eminent authorities. Professor Max Neuburger of the University of Vienna records the opinion that "the medicine of the Indians, if it does not equal the best achievements of their race, at least nearly approaches them, and owing to its wealth of knowledge, depth of speculation and systematic construction, takes an outstanding position in the history of oriental medicine. Thanks to the inexhaustible fount of Sanskrit Literature, its development can be traced in outline at any rate from its primeval origins in empiricisms and theurgy to its height as a completed system of learning." (Neuburger: History of Medicine, translated by Playfair, Vol. I, p. 43.) It needs no elaborate argument to establish that this "inexhaustible fount" requires for its complete exploration an army of scholars; and till this has been achieved, summaries of the history of Indian Medicine must continue to be incomplete and fragmentary. We cannot consequently express surprise

when we find that Neuburger in his great work devotes only 18 pages to the subject, while Professor Buck of Columbia in his work on "the Growth of Medicine from the earliest times to the end of the 18th century" contents himself with a few paragraphs which occupy 8 pages only. In these circumstances, it is no wonder that the topic is not even mentioned in the brilliant lectures on "the Evolution of Modern Medicine" delivered by Sir William Osler at the Yale University in 1913.

I have stated enough to establish the importance of the work undertaken by Dr. Girindranath Mookerjee. In 1909 the University awarded him the Griffith Memorial Prize for the encouragement of advanced study in Science and Letters, on his valuable thesis dealing with the Surgical Instruments of the Hindus. This work has already been published in two volumes and its merits have been widely recognised. In 1911 the University again awarded the Griffith Prize to Dr. Mookerjee for his exhaustive thesis entitled "Notices, Biographical and bibliographical of the Indian Physicians and their works on Medicine." This was followed in 1913 by a thesis on "the Science of Medicine in the Atharva Veda," which participated in the award for that year. The materials thus collected are of immense value and will occupy several volumes. The financial difficulties

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of the University have led to an unfortunate delay in the publication of the work and it is a matter for congratulation that the first volume will now be in the hands of scholars. The subsequent volumes are in the press and will be issued as rapidly as circumstances permit.

ASUTOSH MOOKERJEE.

The 28th February, 1923.

PREFACE

The first volume of the History of Indian Medicine is now offered to the public. It is now many years since I undertook and completed the book. I submitted it as a thesis for the Griffith Prize for original research : "Notices Biographical and Bibliographical of the Ayurvedic Physicians and their Works on Medicine." It was commended and the prize was awarded in 1911. I regret that so long a time has elapsed in the publication of the book. During the last few years there have been advances in the study of history of medicine. Consequently in this edition, not only has the revision been exhaustive, but many portions have been entirely recast and largely re-written. While this volume represents data and conclusions drawn from individual research, it is at the same time largely indebted to the works of others. References have been given to all the authorities and original sources as far as possible.

I may at once disclaim all pretensions to scientific treatment of my subject. I crave the indulgence of the readers for many shortcomings of the work. The writer is not master of his time, and the incessant engagements of his practice leave little leisure for literary works.

To render the finding of any particular subject easy to the reader, I have enlarged the table of contents. The general index, which will be given at the end of the work, will facilitate references.

Before concluding this preface, I tender my thanks to the Vice-Chancellor of the Calcutta University,

Sir Asutosh Mookerjee, for assistance of the utmost value in the preparation and publication of this volume. In fact, it might have been deferred much longer if I had not secured his valuable assistance. I have also to express my gratitude to him for his kindness in writing a foreward to this volume.

156, HARIS MUKERJEE ROAD,
BHOWANIPUR, CALCUTTA. }
1st March, 1923.

G. N. MUKERJEE .

As regards the transliteration of Sanskrit words, we have employed the method adopted in the Congress of Orientalists and circulated in the Journal of the Royal Asiatic Society, ignoring in fact, the unpleasant characters of the Sacred Books of the East.

I

SANSKRIT AND ALLIED ALPHABETS.

अ a	ओ o	ट t	ब b
आ ā	औ au	ठ th	भ bh
इ i	क k	ड d	म m
ई ī	ख kh	ढ dh	य y
उ u	ग g	ण n	र r
ऊ ū	घ gh	त t	ल l
ऋ ṛ	ङ ṅ	थ th	व v
ॠ ṝ	च c	द d	श ś
ऌ ḷ	छ ch	ध dh	ष ṣ
ॡ ḹ	ज j	न n	स s
ए e	झ jh	प p	ह h
ऐ ai	ञ ñ	फ ph	ळ ḷ

˙ (Anusvāra) . . . m

ṣ (Aragraha) . . . ,

˘ (Anunāsika) . . . ṁ

(Udātta) ˆ

ː (Visarga) . . . ḥ

Ṡoarita ˆ

× (Jihvāmūliya) . ḥ

Anudātta ˆ

× (Upadhmanīya) ḥ

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4. Attractions for the study; 5. Useful pastime for busy practitioners. Side-lines of physicians. The utility of study: I. Origin of medicines; (i) Gods, (ii) Animal instructors of medicines; II. Accounts of obsolete customs (i) Viṣa-kanyā or poison-girls, (ii) Śuka-doṣa, (iii) Temple Sleep; III. Therapeutic measures, (i) The immovable apparatus and rattan cane splints in fractures, (ii) Massage, (iii) Hypnotism, (iv) Exercise. IV. Indigenous drugs. V. Identification of diseases, (i) Leprosy, (ii) History of Cholera or Visūcīkā; Small-Pox, Vaccination, Inoculation and vaccination, Śitalā; Syphilis. The methods of popularising the study of medical history: 1. Museums, 2. Exhibition, 3. Library, 4. Pictures	1—169
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INTRODUCTION

INTRODUCTION

Weber, in his *History of Indian Literature*,¹ remarks :
“The number of medical works and authors (in Sanskrit literature) is extraordinarily large. The former are either systems embracing the whole domain of science, or highly special investigations of single topics, or lastly, vast compilations prepared in modern times under the patronage of kings and princes. The sum of knowledge embodied in their contents appears really to be most respectable. Many of the statements on dietetics and on the origin and diagnosis of diseases bespeak a very keen observation. In Surgery, too, the Indians seem to have attained a special proficiency and in this department European surgeons might perhaps even at the present day still learn something from them, as indeed they have already borrowed from them the operation of rhinoplasty. The information, again, regarding the medicinal properties of minerals (especially precious stones and metals), of plants, and animal substances, and the chemical analysis and decomposition of these, covers certainly much that is valuable. Indeed, the branch of *Materia Medica* generally appears to be handled with great predilection, and this makes up to us in some measure at least for the absence of investigations in the field of natural science. On the diseases etc. of horses and elephants also there exist very special monographs.” Dutt says :² “The number of Sanskrit medical works, and especially of small compilations on the treatment of diseases, is too numerous and

¹ Pp. 266-70.

² *Materia Medica of the Hindus*, Preface, p. vii.

indefinite to admit of detailed enumeration here. The enquirer after them is sure to find, in different parts of the country or seats of learning, many little manuals, essays and digests of which he did not hear before. It would seem that in the absence of printing, teachers of medicine used to prepare small compilations containing such prescriptions as they were in the habit of using, for the guidance of their pupils, who copied them for personal use." When writing on medical authors and their works in my thesis "The Surgical Instruments of the Hindus,"¹ we noted that, besides the principal authors and original works mentioned therein, "the number of Sanskrit medical works is simply legion; many of them are daubed with fancy names and are excellent treatises on the different branches of medical science. I intend to publish in a separate volume short notices of the medical authors and their works and so we need not dwell on them here." The desire which I have long entertained of contributing to the History of Indian Medicine has now been realised, and the present attempt is to fulfil the promise made a few years before.

In performing this duty I have endeavoured to embody my researches in a connected form, but I have not been inattentive to the works of other enquirers. It would be, no doubt, interesting to take a brief survey of the work done by scholars as regards our knowledge of Āyurvedic authors and their works. Prof. Wilson² wrote on the early medical authors. Royle³ proved the originality of the Hindu medicine. His arguments for antiquity of Hindu Medicine are deservedly styled as epoch-making researches. Dietz

¹ Vol I, Introduction, p. 33.

² Oriental Magazine, Calcutta, February and March, 1823.

³ Royle : An Essay on the Antiquity of Hindoo Medicine, 1837.

has given in his *Analecta Medica* a long abstract from Ibn Osaibe's biographical work, on the Lives of Indian Physicians. In Ainslie's *Materia Medica*, some of the medical treatises are mentioned. In Wise's *Commentary*¹ we find a list of the Hindu writers on medicine and their works. In Weber's *History of Indian Literature*, we have a few pages on the medical texts of the Hindus. Cordier's *Recntes Decouvertes*, Vāgbhāṭa and other contributions supply many informations on the subject. Dutt in the preface to his *Materia Medica of the Hindus* described some of the important works, and similarly we find them described by the Thacore Sahib,² in his *History of Aryan Medical Science*, with an important bibliography at the end. Roth's monograph on Caraka and the notices of medical authors in *St. Petersburg Dictionary*³ supply us with important details. A more systematic description of the authors and their works, we find in Jolly's *Medicine in the Encyclopædia of Indo-Aryan Research* (Grdr.). Hoernle's contributions "The Commentators of the *Sūsruta Samhitā*,"⁴ and "The Ancient Medical Authors" in his *Osteology*, and his magnificent edition of the Bower MS., are invaluable aids to our study. The notices of the authors in Ray's *History of Hindu Chemistry*,⁴ and the preface in Kunte's *Vāgbhāṭa* are repositories of useful informations on the ancient medical literature. In the *Vanaśadhi Darpaṇa*, Kavirāja Virajācarāṇa Gupta, gives us an elaborate list of *Āyurvedic* books in Bengali, the important works being described in detail. I have also availed myself of his contributions in

¹ Wise : *Commentary on the Hindu System of Medicine*, 1843.

² Chapter II: Ancient Writers on Hindoo Medicine.

³ Supplement Vol. vii—Medical Authors.

⁴ J. R. A. S. 1907.

his Account of the Principal works of the Atreya School of Medicine. Many MSS. are noticed in the catalogues of Sanskrit works; and I have derived special help from L. I. O. Cat., Nepal Cat., Bik. MSS., Oxf. Cat., Cat. Cat., G. O. M. L. Cat., etc., as these contain descriptions of various MSS. ; and I take this opportunity of acknowledging my indebtedness to Mitra, Śāstri, Bhāndārkar, Aufrecht and others. It is more than probable that I may have failed to refer to some contributions which ought to have been mentioned, but I am confident that my sins of omission have not been numerous. It has been my earnest desire to omit nothing of importance. A sufficient acknowledgment of the source of the literature that has been laid under contribution will be found in the index of the authors quoted.

The European scholars had a preconceived notion that the ancient Sanskrit medical books contained little or nothing that was original. Thus we find that though the other branches of Sanskrit learning were vigorously ransacked by their critical judgment, the Hindu science of medicine received little or no attention. Dutt says¹ : "The Hindu medical science unfortunately received less attention from the earlier antiquarians than the other Indian Sciences, and the facts collected even up to the present date are not nearly exhaustive." Even Sir William Jones, a savant with whom it would be impossible to name any other in the same breath in oriental scholarship, did not think it worth while to examine the Sanskrit medical books critically. He says: "What their old books contain on this subject, we ought certainly to discover, and that without loss of time; lest the venerable but abstruse language, in which

¹ Civilisation in Ancient India, Vol. II, Ch. IX.

they are composed, should cease to be perfectly intelligible, even to the best educated natives, through a want of powerful invitation to study it. Bernier, who was himself of the Faculty, mentions approved medical books in Sanskrit, and cites a few aphorisms, which appear judicious and rational; but we can expect nothing so important from the works of Hindu and Muselman physicians, as the knowledge, which experience must have given them, of simple medicines."¹ Later on he complains: "I have no evidence, that, in any language of Asia, there exists one original treatise on medicine considered as a science: physick, indeed, appears in these regions to have been from time immemorial, as we see it practised at this day by Hindus and Muselmans, a mere empirical history of diseases and remedies; useful, I admit, in a high degree, and worthy of attentive examination..... We still have access to a number of Sanskrit books on the old Indian practice of physick, from which, if the Hindus had a theoretical system, we might easily collect it." He concludes: "On the whole, we cannot expect to acquire many valuable truths from an examination of eastern books on the science of medicine; but examine them we must, if we wish to complete the history of universal philosophy, and to supply the scholars of Europe, with authentic materials for an account of the opinions anciently formed on this land by the philosophers of Asia,"² Even now, after an interval of a century, similar remarks are made by learned men. Willoughby³ in his *History of Medicine*, writes: "It would be useless, were it possible, to discuss in this place the medicine of India and China, which has no

¹ The works of Sir William Jones, London, 1799, Vol. I, p. 12.

² *Ibid*, Vol. I, pp. 161-62.

³ *Encyclopædia Medica*, Vol. 7.

direct interest to us." This need cause no surprise, for the majority of medical men practising in India are ignorant of Sanskrit language in which the ancient medical books are written and the exigencies of a lucrative practice have left them without inclination for the requisite study. But it must be acknowledged that it is not impossible for a surgeon or physician to become an active contributor to the literature of the profession. The renowned Adams was only a village surgeon. The scholars, on the other hand, having no knowledge of medicine, may have been prevented by lack of the necessary materials from carrying out adequate researches. Thus we find that even modern scholars are not unanimous as regards the remote origin of the science. Whitney¹ says : "The medical science, although its beginnings go back even to the Veda, in the use of medicinal plants with accompanying incantations, is of little account, and its proper literature by no means ancient."

The study of the ancient books is very important in the construction of the history of Hindu medicine. "The history of medical literature forms a very large part of medical history. If we open a standard history of medicine, it may seem in some parts as if it were little else than a history of books. One feels that this is not quite just, as books contain but a small part of medical activity through all the ages. The author of a medical book is not necessarily a fair representative of his class. He may have been superior to the average. On the other hand, the mere fact that what he wrote has survived does not show him to have been a greater physician than others of his contemporaries who wrote nothing, or whose works are lost. Nevertheless since books are in the end more

¹ Introduction to Whitney's Sanskrit Grammar, page xxii.

INTRODUCTION

enduring than wrought metal or sculptured stone, medical writings are sometimes the only evidence we have of the state of medicine during long tracts of time.”¹ It is only from a diligent research into the Sanskrit books that we can expect to become acquainted with the medical science and learning of the ancient Hindus.

The Sanskrit medical books still exist in manuscripts which lie scattered here and there. Only a few important books have been edited and published ; and there are numerous compositions, either treating of the whole system or of separate topics, that bear a character of more or less weight. One or two books only have been translated in English in recent times. So practically these works are still sealed books to the world, and the historians of medicine make no room for the study of Indian medicine in their works. Royle says:² “Considerable as appears to have been Hindoo medicine and extensive as no doubt has been the influence of its *Materia Medica*, the absence of all of the former in the annals of medicine, can only be accounted for from the geographical position of India with respect to Europe, and the total unacquaintance with the refined language of the former, which prevailed in the latter even to our own day. For when the name of even the most celebrated Hindoo writer presented itself before a modern author writing expressly on the subject, it is passed over without comment or examination—“*Scharak Indus, a Rhazeo citatus plane ignotus*” (Sprengel. *Hist. Rei. Herb.* 1. p. 234.) That a Hindoo system of medicine does exist, we know from their numerous books on all branches of that science ; that some of these were written prior to the Arabs, we have shewn by their being quoted in the works of the latter. How much earlier than the

¹ Payne : *English Medicine in the Anglo-Saxon Times*, p. 10. .

² Royle : *Antiquity of Hindoo Medicine*, pp. 74-75.

eightth century the principal of them were composed, we may only hope to ascertain by the progress now making in settling Indian Chronology. But in absence of this it is practicable, as I have stated, to get a conviction of the cultivation of medicine among the Hindoos at still earlier periods, from occasional notices by writers of the West; and we cannot but allow them an early knowledge of the properties of many of the valuable drugs which their country afforded them, when we see the necessarily subsequent employment of the same by the Greeks and Romans." It is unfortunate that even the names of Sanskrit authors and their works are generally unknown to scholars. To supply this want I have collected the notices of the authors and their works from various sources, of which it is impossible to detail a list. The ages in which they lived are shrouded in obscurity and mystery, and nothing like a chronological arrangement was ever attempted. Their birth-place, parentage, or education have eluded research, and little is known of the time of their birth. We learn little concerning many eminent physicians except that they are quoted occasionally in text books, commentaries, annotations, and glosses. Of the incidents of their personal lives we have no record. Where they lived and practised are all unknown to us. The chronological relations of the authors, which I have attempted in this work, must not be taken as settled facts in the history of literature; they are only land marks in vast unexplored area, which may be of some help to travellers on these lines. The present work can lay no claim to finality, the chronology must for the present be found somewhat tentative. It is a brief survey over the whole field which begins with the early dawn of Hindu civilisation, the age of the R̥gveda to the present time. The arrangement of the authors might in some

places seem arbitrary, but on close inspection it would be found that it was the only alternative left to the writer from the references to authors quoted in books, in the absence of any authentic account of their lives.

In the history of medical science every chapter might have as its heading the name of a great surgeon or physician, who as pioneer has determined and guided progress. We have adopted this plan in the present contribution. The design of the work is expressed in its title. The need for it, as a contribution towards a history of medicine, is proved by the fact that no work professing to cover the whole field of medical bibliography of Ayurveda has hitherto appeared in any language. How far I have succeeded in filling up the blank that exists in this department of medicine must be left to the judgment of the readers. I felt that it would be rendering useful service to scholars engaged in this field of research, if I could bring together the latest and the most complete information, which is diffusely recorded in the transactions of learned societies, in journals, in monographs and in systematic treatises, in a form which would allow of ready and easy reference.

Again as an index of the Sanskrit medical works it would be invaluable to scholars in identifying the recently discovered MSS. of Indian medicine in different parts of the country. I am confident that MSS. of Sanskrit medical literature are still extant in different places in India and no time should be lost in organising a regular search for the Ayurvedic MSS. "The climate, and the materials of which these ancient works are composed, render them very liable to be destroyed. Some are already lost, and the difficulty of procuring correct copies of the remainder, is yearly increasing." (Wise.)

I now hand over my work to the learned public. I am fully cognizant of the very defective manner in which I

have treated the subject and conscious of the numerous imperfections and drawbacks which are plentifully abundant in its pages. I must however express a hope that, inspite of the many lacunæ and faults which cannot pass unheeded, it may induce others more capable of elucidating such a complex subject to devote their researches and investigations to it.

In the continent of Europe, the study of history of medicine had been continued with some zeal from the earliest times. In France, medical history has always a chair of its own at the Université; at Vienna, the practice seems to have been the same. The Germans cultivated this branch of medical science in the eighteenth century; and it used to be called a peculiarly German department of science. Even in ancient times, the study of history of medicine was not neglected. In the Hippocratic Collection, we have a treatise on "Ancient Medicine." Celsus's great work "*De Medicina*" is of the highest value as a history of medicine from the time of Hippocrates to his own days.

The first complete history of medicine was written by Sprengel. His "*History of Medicine*" appeared in successive editions in German and in a French translation from 1792 to 1828. There is no English translation of this important work. The book is now nearly out of date. Hecker's two works, published in 1822 and 1839, belong to a bygone age. So is Le Clerc's "*Historie de la médecine*," Genève, 1696, 8vo. Amast, 1723, 4to, which only continues the history till the age of Galen.

The most complete works and the best, because contemplating the history of medicine from the standpoint of modern science, are:—Haeser: *Lehrbuch der Geschichte der medicin und der epidemischen Krankheiten*. Jena, 3rd ed. 1875-79.—Daremborg: *Histoire des Sciences*

médicales, Paris, 1870.—Puccinotti: "Storia della medicina."—Bouchut: Histoire de la médecine et des doctrines médicales, Paris, 1872-3; it compares the ancient and modern schools of medicine.

For special periods, we have:—Wüstenfeld: Geschichte der Arabischen Aertzte und Naturforscher, Göttingen, 1840.—Lucien Le Clerc: Histoire de la médecine Arabe. Paris, 1876.—Darembert: L'Ecole de Salerne. Paris, 1861.—De Renzi: Storia documentata della Scuola medica di Salerno, 2nd Ed. Naples, 1857.—Collectio Salernitana, 5 vols. Naples, 1852.—Hirschel: Geschichte der Brown'schen Systems und der Erregungs Theorie. Leipzig, 1846.

"The historical investigation, like the geographical, had from the outset a dual character, in as much as it adopted either the chronological standpoint or the pathological" (Hirsch). Among the best known works belonging to the chronological class are:

Noah Webster: Brief History of Epidemic and Pestilential Diseases, 2 Vols., Engl. Ed., 1800.

Bascomb: A History of Epidemic Pestilences, from the Earliest Ages.

Schnurrer: Chronik der Seuchen. 2 Vols., Tübingen, 1823.

Villalba: Epidemiologia Española.

Ilmoni: Bidrag till Nordens Sjukdoms Historia.

On the Pathological side, we have:

Hensler: Vom abendländischen Aussatze, Hamburg, 1790, and Geschichte der Lustseuche. Altona, 1763.

Ozanam: Histoire médicale génér. et particul. des maladies épidémiques. 4 Vols., Paris, 1835.

Hecker: Ueber die Justinianeische Pest. Der Schwarze Tod in 14 Jahrhundert, Engl. transl. by Babington, Lond. 1833. Die Tanzwuth, Berlin, 1832. Der

englische Schweiss, Berlin, 1834. Die epidemischen Krankheiten der Jahre 1770-72.

Haesser : Lehrbuch der Geschichte der Medicin und der epidemischen Krankheiten, 1880-82.

Atlas Historique et Bibliographique de la Medicine composé de Tableaux sur l'Histoire d'Anatomie, de Physiologie, de l'Hygiene, de la Medicine, de la Chirurgie et de l'Obstetrique, etc., Paris, 1829.

There are also important works which treat of the doctrinal aspect of medicine :

Broussais : Examen des Doctrines Médicales et des Systemes Modernes de Nosologie, Paris, 1816.

Daremborg : La Medicine, Histoire et Doctrines, Paris, 1865.

Hirschel : Geschichte der Medicin. Wien, 1862.

Renouard : History of Medicine. Transl. by Comegys, London, 1856.

Portal : Hist de l'Anat. et de la Chirurg.

Ploucquet : Literatura Medica Digesta : It is a store-house of references on medical subjects.

Briot : Histoire de l'Etat et des Progrès de la Chirurgie Militaire en France, 1817.

Mollet : La Médecine chez les Grecs avant Hippocrates, 1906.

Willis : Pharmaceutice Rationalis. Geneva, 1876-77.

But this spirit of historical research gradually declined even in the continent of Europe. " In France, Daremborg, Lorain, Maurice Raynaud seem to have left no successors ; and in Germany, where one might have looked for better things, the history of medicine has fallen out of the programme of University studies. Yet it is not so long ago that every German University had a special lecturer on the subject, but, as the chairs fell vacant, they have been

left unfilled, till now there is but one professor of the history of medicine in the Fatherland, in the person of Dr. A. Hirsch, of Berlin." ¹ In recent years an attempt has been made to revive the study in Germany; and we find many useful works published within the last fifteen years.

As regards systematic treatises only a few important works dealing with the subject have recently been published. Gurlt's '*Geschichte der Chirurgie*' is a monumental contribution to the history of medicine. Pagel's works: *Historisch Medicineschen Bibliographie für die Jahre 1875-1896* and *Einführung in die Geschichte der Medicin*, appeared in 1898. An encyclopædic work on the subject, as designed by Puschmann, namely, *The Handbuch der Geschichte der Medizin*, was successfully edited by Professors Neuberger and Pagel (1902-5). We have before us Neuberger's *Geschichte der Medizin*, in an English garb, Vol. I. By Playfair, London, 1910. This volume narrates the story of the growth of the medical science to the Renaissance. The second volume of Neuberger's '*History of Medicine*' is divided into two parts, of which the first deals with the progress of the science during the time between the death of Galen and the end of the fifteenth century. The concluding instalment is expected to appear shortly.

Under the auspices of the Imperial Academy, Berlin, and under the direction of Prof. Diehl, scholars have collated the important MSS. of Greek texts in the libraries of Europe; and we expect soon a new text of the Greek writers on medicine, published by Trubner & Co. "A topographical list has been issued with reference to all the sources of our knowledge of Hippocrates and later Greek

writers. An Institute for the study of history of medicine has been founded at the University of Leipzig as a memorial to the distinguished scholar Prof. Puschmann. Under the direction of Prof. Sudhoff the Institute will undertake an entirely new edition of the Latin authors." The French school of medical historians has rendered eminent services, and medical history has for many generations received encouragement from the Universities in France. But Germany has outstripped all nations, and "the output of works and monographs, representing scholarship of the first class, is equal to the rest of the world put together" (Osler). One must look to Germany when one wishes for information regarding the history of medical science.

A very important systemic study of drugs profusely illustrated by reproductions of photographs showing particularly the methods whereby they are produced and brought to our markets, by Professor Tschirch of Berne, is now in course of publication by Tauchnitz of Leipzig.

Under the instruction of the Italian Government, Dr. Luigi Sambon of Rome commenced his work on the History of Medicine in 1895 for presentation at the next meeting of the International Medical Congress. His curious collections of "donaria" or votive offerings of ancient Italy and surgical instruments taken from the ruins of Pompeii and Herculaneum throw considerable light on the history of the healing art.

Kostomiris published an interesting treatise on Ophthalmology and Otology among the ancient Greeks in 1887. The medical faculty of Athens and the senate of the University took up the project of printing the pseudo-Hippocratean treatises which were not published before, as well as treatises of Kratenas, Galen and Promotus.

The authorities of the Philadelphia College of Physicians have officially recognised the subject of the history of medicine for which a special section has been formed in 1905.

In Europe, the study of the history of epidemic diseases has been pursued with an earnestness, and the medical men in England contributed their quota. We now possess some good histories of epidemic and pestilential diseases :

James Moore : History and Practice of Vaccination, 1817; History of the Small Pox, London, 1802.

A History of Epidemics in Britain from A. D. 664 to the extinction of Plague. By Dr. C. Creighton, M.A., M.D., 1891.

Hirsch : Handbook of Historical and Geographical Pathology, 1860, English translation by Creighton, New Syd. Soc. 1883. Geschichte der Ophthalmologie, Handbuch der gesaruten Augenheilkunde von Graefe und Sacmisch, Bd. vii, s. 293.

Herschberg : Aegypton, Geschietliche studien eines Augenarzles, Leipzig, 1890.

F. Buret : Syphilis in Ancient and Pre-historic times, translated by Dr. Ohmann—Dumesnil, 1891. F. A. Davis, London.

Fayrer : The Natural History and Epidemiology of Cholera, 1888.

Macpherson : Annals of Cholera from the Earliest Period to year 1817, 1870.

Macnamara : History of Asiatic Cholera, 1876.

Bryden : Cholera in the Bengal Presidency from 1817 to 1872.

Bellend : History of Cholera in India.

Epidemics of the Middle Ages, Translated by Babington for Syd. Soc., 8vo, London, 1844.

Stephenson, Sydney : Epidemic Ophthalmia, 1895.

Gasquets : History of the Great Pestilence.

Hanser : Le cholera en Europe depuis son origine jusqu'a nos Jours. Paris, 1897.

Thompson (John) : Historical Sketch of Small Pox, 1822.

George : History of Small Pox, 1833.

Thompson : Annals of Influenza, from 1510-1890 in Great Britain, Syd. Soc.

Hodges : A Historical Account of the Plague in London in 1665, London, 1721.

America has contributed the Index Medicus, and a work entitled Physicians and Surgeons of America has been published at Concord, U. S. A. It contains biographical accounts, with portraits, of more than 1,200 representative Physicians and Surgeons of U. S. A., Mexico and Canada, in 1896. The other American publications are :—

Smart : The medical and Surgical History of the war of the Rebellion, 1888.

Jonathan Wright : Medical History of Laryngology and Rhinology.

John Mackenzei (Baltimore) : Historical and Literary Researches on Laryngology.

To supply a bibliography of current Spanish medical literature, of which, comparatively little has hitherto been known to the learned men of the world, the Index Medicus Hispanus began to appear in 1904, under the auspices of the Colegés de Medicos of Gerona.

In England, on the other hand, the study of the history of medicine has never been a favourite subject with scholars. "It is not creditable to a country which had laid the healing art under such deep obligations, and which annually sends forth the flower of her youth to its study

or its practice, that her only history of medicine which learned Europe deigns to notice is that written by Dr. John Freind early in the last century. Not till our universities adopt the custom of their continental sisters, and add a chair of the history of medicine to their teaching strength, will they enjoy the adequate conditions under which they may do posthumous justice to their great practitioners and consultants, instead of leaving the task to the alien and sometimes uncongenial hands of a Haeser, a Daremberg, or a Puccinotti.¹ Dr. Payne remarks: "We must confess, with some shame, that our own country has been, and is behind most other civilised nations in the bulk and value of its contributions to the history of medicine. Germany, France and Italy have produced, on the subject, brilliant and profound works, which remain our standard authorities. The smaller countries such as Holland and Switzerland have not been behind hand; while our cousins across the Atlantic are now displaying characteristic energy and zeal in the study of medical antiquities. They have indeed already produced, in the *Surgeon General's Catalogue* of Dr. Billings,² by far the most complete bibliography of medicine, and probably the best bibliography of any large branch of science, ever compiled in any age or country.

When we consider the interest shown, and the positive results achieved in medical history, by the medical profession in all these countries, we must admit that our own countrymen have displayed, in comparison, lamentable apathy and but little industry."³

¹ *Lancet*, 1890, Vol. II, p. 85.

² *Index Catalogue of the Library of the Surgeon-General's Office, United States Army. 1867-1897.*

³ *Fitz-Patrick Lectures*, 1903, p. 4.

In the Editor's Preface to the first edition of Vol. I of *Paulus Ægineta*, Adams remarks: "Notwithstanding the additions which have been made of late years to the history of medical literature, it must still be admitted that there is not, in the English language, any work which contains a full and accurate account of the theoretical and practical knowledge possessed by the Greeks, Romans, and Arabians, on matters connected with medicine and surgery. Nor, as far as I can learn, is the case very different with the continental languages. For, although the German and French have lately acquired several histories of medicine distinguished for their ability and research, the object of these works would appear to be confined to a general exposition of the leading discoveries and revolutions in doctrine which marked each particular age or epoch in the profession; and I will venture to affirm that no person will be able to acquire from a perusal of them anything like a competent acquaintance with the minute details of ancient practice."

There is no doubt that the English people did not appreciate the importance of historical research in the department of medicine. But the history of medicine as a subject had not been wholly neglected in England. Bartol and Caius were learned in it. Sir Hans Sloane (1719-1785), "made collections of materials for medical history which begin with twelfth-century MSS. of Hippocrates and Galen and extend to the letters of the physicians of his own time."¹ His famous MSS., 3000 in number, in the British Museum contain letters and notes by the eminent physicians of the country preceding his death, and they thus form the principal source of the medical history of England during the long period covered by the six reigns—Charles II to James II.

¹ Moore : *Medicine in the British Isles*, 1905-6, p. 2.

In medical biography, there are no doubt some good works in the English tongue. In 1640, Dr. Hamey wrote in Latin a biographical history of the medical men of his time from 1628, entitled *Bustorum Aliquot Reliquiae*, which was probably the origin of Dr. Munk's Roll of the College of Physicians, in three Volumes, 1518-1825, London, 1879.—Duns: Memoir of Sir James Simpson, Edinburg, 1873;—for the lives and works of British Physicians and Surgeons, the articles in the Dictionary of National Biography, Smith, Elder & Co: edited by Sidney Lee;—the faithful biographies of departed medical worthies in the *Asclepiad*, and the obituary notices in the various medical journals;—Masters of Medicine series by T. P. Unwin, London: Sydenham by Payne, Hunter by Paget, Harvey by Power, Simpson by Gordon, and Stokes by his son, are models of accurate and informing biography. There are also other standard medical biographies:

Sir James Y. Simpson: By Eyre Ballantyne Simpson, Famous Scots series.

Life of William Cullen: By John Thomson, Edin., 1859.

Biographical preface by Thomas Beddoes in "Elements of Medicine" by John Brown.

Ambrose Paré and his Times, 1570-1590: By Stephen Paget, 1897.

Kuhn: *Medicorum Græcorum Opera quæ exstant*. Lipsiæ, 1821—30. This work includes the works of Hippocrates, Aretæus, Discorides and Galen.

Joannes Rhodius (Dane): Life of Celsus subjoined to the 2nd Ed. of his work *De Acia Dissertatio, ad cornelii Celsi mentem, qua simul universa Fibulæ ratio explicatur*, Hafniæ, 1672, 4to.

Biographo universalle.

Aikin: The Life of Caius.

Burton : The Life and Writings of Boerhaave, 2 vols. Lond., 1743.

Johnson : Life of Boerhaave, Lond., 1834.

W. Cullen Brown : Memoirs of John Brown, in his edition of Brown's works, 3 vols., 8vo, 1804.

Mathew Duncan : Life of William Hunter, in Edin. Med. Jour., June, 1870.

• Drury Otley : Life of John Hunter, prefixed to Palmer's edition of the Works of John Hunter, 4 vols. 1835.

Baron : Life of Jenner, 1827.

Guthrie : The Medical History of J. Evelyn and his Time (1620-1706), 1905.

Dr. William Smellie and His Contemporaries : A contribution to the History of Midwifery in the 18th Century : By John Glaister, M. D., Glasgow. James Maclehose & Sons, 1894.

Life of Richard Owen : Written by his grandson and published by John Murray.

Life of Sir Henry Hallford : By William Munk, M.D., Longmans & Co., 1895.

Life and Works of John Arbuthnot : By Geo. A. Aitken, Clarendon Press, 1892.

Epps : Life of John Walker, M.D., London, 1831.

Aveling : Biographical Sketches of British Obstetricians.

MacMichael and Munk : Lives of British Physicians. 1857.

Rolleston : Life of James Lind. Journ. Royal Nav. Med. Service, Vol. I, 1915.

In the Oxford Editions,—Edited by Dr. Greenhill :

Life of Sir James Stonhouse, Bart., M.D.

Anecdota Sydenhamiana.

Life of Thomas Harrison Burder, M.D.

Life of George Cheyne, M.D.

Life of Charles Brandon Trye.

Walsh: *Makers of Modern Medicine*, 1909.

Old Time *Makers of Medicine*, 1911.

Fayrer: Sir Ransald Martin. London, 1907.

The Academic Gregories: By A. G. Stewart, *Famous Scots Series*, 1901. Pub. by Oliphant Anderson and Ferrier, Edin. and London.

For Greek and Roman Physicians, the reader is referred to the articles in Smith's (larger) *Classical Dictionary* on "Hippocrates," "Galen," "Celsus" and the rest, by Dr. Greenhill;—Sprengel: *Sundry Distempers unknown to the Ancients*, etc.;—Adams: *Translation with introduction and commentary on the works of Hippocrates, Paulus Aegineta, and the Extant Works of Aetius*, Syd. Soc. Ed.—The First Four Books of Celsus, Containing the Text, *Ordo Verborum*, and Translation: By Steggall, 1857 (Churchill).—'Harvey and Galen' by Payne, *Harveian Oration* 1896;—Quincey: *Medicina Statia*; being the Aphorisms of Sanctorius, 1728.

Regimen Sanitatis Salernitanum: Trans. by Sir A. Croke, Oxford, 1830.

Aristotle: *On Youth and Old Age, Life and Death, and Respiration*: By W. Ogle, M.A., M.D., Oxon, F.R.C.P., London. Longman, Greene & Co., 1897.

Celsus: *De Medicina*—Milligan's translation, 1831.

As regards complete history which give a comprehensive review of the evolution of the art and science of medicine from its earliest beginning, we have:—

Freind: *History of Physick from the Time of Galen to the Beginning of the 16th century*, London, 1725. He begins with Oribasius and Aetius and ends with Linacre, the founder of the Royal College of Physicians of London.

Russell: *The History and Heroes of the Art of Medicine*, London, 1861.

Wootton: *Chronicles of Pharmacy*, 2 vols. London, 1910.

A *Historical Sketch of Surgery: Ancient, Mediæval and Modern*. By B. A. Watson, A.M., M.D., Surgeon to Jersey City and Christ Hospitals, reprinted from the *New York Medical Journal*, from August, 1890.

History of Medicine and the Medical Profession, by J. H. Bass: Translated by H. E. Handerson, M.A., M.D. New York. 1889.

Much information may be gathered from the historical retrospects prefixed to many chapters in Aitken's *Science and Practice of Medicine*, in Reynold's *System*, and in Pepper's *system of medicine*. In the recent edition of Albutt's *System*, *History of Medicine* by Albutt, and *Medicine in Modern Europe* by Payne;—in Osler's *System*, the *Evolution of Internal Medicine* by Osler;—in *Encyclopædia Medica*, Vol. 7, *History of Medicine* by Willoughby;—in *Encyclopædia of Practical Medicine*, *History of Medicine* by Alison;—in *Encyclopædia Britannica*, *Historical Notice of Surgery* by Charles Creighton;—in *Chambers' Encyclopedia*, *History of Medicine* by Pettigrew; all these articles have brought up the subject to the level of our existing knowledge.

The History of Medicine, Surgery and Anatomy from the creation of the world to the commencement of the 19th century. By William Hamilton, M.B., in 2 vols. London, Colburn, 1831, Post 8vo.

Clifton: *the state of Physik, Ancient and Modern*, Lond., 1732.

Outlines of the Ancient History of Medicine, being a view of the progress of the healing art among Egyptians,

Greeks, Romans and Arabians. By D. M. Moir, Surgeon. Edinburgh, Blackwood, 1831, 12 mo.

Wise: Review of the History of Medicine. - London 1887. History of Medicine among the Asiatics, 2 Vols., 1868.

Collection De Chirurgiens Grecs: Bibliothèque Nationale, Paris.

Milne: Surgical Instruments in Greek and Roman Times. 1907.

Elliot: Outlines of Greek and Roman Medicine. 1914.

John Anderne and his Time: By Anderson, Lancet, Vol. II, 1897.

Thompson: The Mystery and Romance of Alchemy and Pharmacy. London, 1897.

Netter: History of Ancient Pharmacy.

Garrison: History of Medicine. 1913. *

Beckman: History of Discoveries and Inventions, Art, Infirmarys and Dispensaries.

Bostock: Sketch of the History of Medicine. 1835.

Allbutt: The Historical Relations of Medicine and Surgery to the end of the 16th Century. 1905.

Minor: Medicine in the Middle Ages, Extracts from Dupony's Le Moyen Age Medicale. 1889.

Roswell Park: An Epitome of the History of Medicine, 1897.

Wilder: History of Medicine.

Remondino: History of Circumcision. 1891.

Surgery, Past and Present. By T. Spencer Wells. 1877.

History and Cure of Disease. By W. Heberden. 1806.

The Healing Art, in its Historic and Prophetic aspects. By R. Quain, Harveian Oration, 1885

Medical men and Manners of the Nineteenth Century.—Balliere, Tindal, and Cox, 1877.

Monro: *The Scientific Basis of Medicines*. Glasgow Med. Journal, 1885.

Headland: *Advance in the Science of Medicine in Modern Times*. *Lancet*, Lond., 1858, Vol. I, pp. 27-79.

Brunton: *Introduction to Modern Therapeutics*, Lond., 1892.

Chambers: *True Art of Healing*. London, 1866.

Willis: *Pharmaceutica Rationalis*. Geneva, 1876-77.

Bellamy: *History of Surgical Anæsthesia*, 1896.

Withington: *Medical History from the Earliest Times*, London, 1894. The Scientific Press Limited.

Griffiths: *Early Welsh Medicine*, 1888.

Jones and Withington: *Malaria and Greek History*, 1909.

Cleveland: *On Induction and its Association with the History and Progress of Medicine*. Harveian Lecture, 1896.

Brunton: *Pharmacology and Therapeutics, or Medicine Past and Present*, London, 1880.

Practice of Medicine among the Burmese with an Historical Sketch of the Progress of Medicine from the Earliest Times. By Keeth Norman Macdoland, M.D., Late Civil Surgeon of Prome, 1879.

Packard: *History of Medicine in the United States*, 1901.

Meryon: *History of Medicine from the Earliest Ages*.

Dunlison: *History of Medicines from the Earliest Ages*.

Begbie: *Address on the Ancient and Modern Practice of Medicine*, delivered before B. M. A. in August 1875.

Gairdner: *On the Physician as 'Naturalist.'* Presidential Address delivered before B. M. A., 1888.

MacLeod: *On the Progress of Surgery during the last half century*, B. M. J. 1888.

Miller : Historical Notice of Surgery in his Principles of Surgery. 1844.

McKay :—History of Ancient Gynaecology, 1901.

Foster : Lectures on History of Physiology during the Sixteenth, Seventeenth and Eighteenth Centuries, 1901.

Guerini : A History of Dentistry from the most Ancient Times until the end of the 18th Century.

Windsor : Historical Researches on Use of Forceps to Fix Eye. M. R. Vol. II, pp. 219, 517. 1868.

The History of Medicine, Philosophical and Critical, from its Origin to the Twentieth Century. By David Allyn Gorton, M.D. Two Volumes (G. P. Putnam's Sons) 1910.

Medical Works of the Fourteenth Century by Rev. George, Henslow, London, 1899.

The Healing Art : Published by Ward and Downey of London.

Bedroe : The Origin and Growth of the Healing Art.

Puschmann : A History of Medical Education from the most remote to the most recent times, 1891.

Macalister : History of Anatomy in Cambridge, B. M. J., Vol. I, P. 449, 1891.

Payne : An Unpublished English Anatomical Treatise of the 14th century and its relation to Vicary's Anatomy. Lancet, Vol. I, p. 200, 1896.

Newman : *Archæologica Medica*.

Hundert Jahre Allgemeiner Pathologie (A Century of General Pathology), by R. Virchow, Berlin, 1895.

Ryan : History of Medical Jurisprudence in the Introduction to his Manual of Medical Jurisprudence, 1836.

Cook : The History of Medical Ethics, N. Y. M. J., 1915.

The English literature, though poor in histories of medicine, is not, however, without learned monographs on special departments of the medical sciences,—histories which

deal with the origin, growth and vicissitudes of medical schools and corporations. Payne says :¹ " We have also interesting collections for the history of medical institutions such as *Memorials of the Craft of Surgery in England* by the late Mr. J. F. South, edited by Mr. D'Arcy Power ; the *Annals of the Company of Barber Surgeons* ; and good histories of the Colleges and Faculties of Physicians and Surgeons of Edinburg, Glasgow and Dublin. Mr. Rashdall's important and learned work *The Universities of Europe in the Middle Ages* deals with some important periods in medical education. The Early English Text Society has published some interesting mediæval works on medicine. Finally we have in Dr. E. H. Withington's *Medical History from the Earliest Times* (London, 1894) an excellent compendium, which is less widely known than it deserves to be."

Cockayne: *Leechdoms, Wort Cunning and Starcraft of Early England*, 3 vols., 1864-6.

Beatson: *The Knights Hospitallers in Scotland and their Priory at Torphichen*, 1903.

Bedford and Holbeche: *A History of the Order of the Hospital of St. John of Jerusalem*, 1902.

Tenison: *Chivalry and the Wounded*. It contains an historical account of the Hospitallers of St. John of Jerusalem (1014-1914), 1915.

Notestein: *A History of English Witchcraft from 1558-1718*.

Paget: *A short Account of the Royal Society of Medicine*.

Oppert: *Hospitals, Infirmaries and Dispensaries*. 1888.

Hospitals and Asylums of the World: By H. C. Burdett, 4 vols. and Portfolio, 1888, J. and A. Churchill.

¹ Payne: *English Medicine in the Anglo-Saxon Times*, p. 5.

Rausch : Medical Education, Medical Colleges, and the Regulation of Practice of medicine in U. S. A. and Canada, 1891.

Crawford : History of Indian Medical Service 1600-1913, 1914.

Jones : The Medical History of the Confederate Army, 1861-65.

Medical History of Arabia by Dr. Amoureux, of Montpellier, 1831.

The Annals of the Barber-surgeons of London, compiled from their records and other sources. By Sidney Young, one of the Court of Assistants of the Worshipful Company of Barbers of London, with illustrations by Austin T. Young, London : Blades, East, and Blades, 1890.

The Medical Institutions of Glasgow : By J. Christie, 1888.

History of Durham College of Medicine, 1890.

English Sanitary Institutions : By Sir J. Simon, 1897.

Robert Christison : An address on the Rise and Progress of the Edinburgh School of Medical Learning. Delivered at B.M.A., August 3, 1875.

John Mason Good : A History of Medicine, so far as it relates to the profession of Apothecaries, from the earliest accounts to the present period, 12 mo. Lond. 1795.

Weddel : Arcana Fairfaxiana Manuscripta : a MS. volume of Apothecaries' Lore, nearly three centuries old. 1890.

Regnier : Hypnotisma Et Croyances Anciehnnes, Progress Medical. Paris.

The list of the books, though it is imperfect in many ways, may serve as a catalogue of the chief works on the history of medicine in the European languages.

There is ample field of research in the collection of bibliography of the science of medicine as it was practised in ancient times, in the different countries of the world : Egypt, India, China, Greece, Rome and Arabia. The scholars may thus write the history of medicine—its rise, growth, and downfall—from materials scattered in books and periodicals. I have attempted below a short bibliography of Egyptian medicine :—

Prosper Alpinus : *De Medicina Ægyptorum*. Editio Nova. Lugd. But. 1719.

Hermanus Corningius : *De Hermetica Medicina*, Libri Duo. Helmetst.

O. Borrichius : *Hermetis Ægyptorum et Chemicorum Sapientia ab Hermanni Couringii Animadversionibus vindicata*, Hafniae, 1674.

Richard Strong Sargent : *Observations on the State of Medical Science in Egypt ancient and modern*. Dublin, J. M. S., Vol. XX, p. 81. Dublin, 1842.

J. Clarkson : *On the State of Medicine in Ancient Egypt*. Medical Times, Vols. X and XI. London, 1844 and 1845.

M. Donovan : Were the priests of Ancient Egypt the first Physicians ? *The Medical Press and Circular*, Vol. II, p. 20, 1870.

J. G. Wilkinson : *The Manners and Customs of the Ancient Egyptians* : new ed., revised by Dr. Samuel Birch, 3 vols., London, 1878.

Dr. Richard Millar : *Disquisitions in the History of Medicine*, Part I, Edinburgh, 1811. It contains 100 pages on Egyptian Medicine and Priest Physicians.

Finlayson : *Ancient Egyptian Medicine*, B. M. J., Vol. I. 1898. Pp. 748, 1014, 1061.

Anatomical and Medical Knowledge of Ancient Egypt (abstract). Royal Institution of Great Britain, March 5th, 1886.

T. J. Pettigrew : History of Egyptian Mummies, London, 1884. Pp. 44-49.

Hieroglyphics and Alphabet in Chambers' Cyclopædia, 1890.

E. A. W. Budge : The Dwellers on the Nile. London, 1891.

Dr. Thomas Young : Vol. III of Miscellaneous Works. Edited by John Leitch, 1855.

R. Caton : I-em-Hotep and Ancient Egyptian Medicine. Harveian Oration, 1904.

Comrie : Medicine among the Assyrians and Egyptians in 1500 B. C.

Stern : Papyros Ebers, 2 Vols. Leipzig, 1875.

Joachim : Papyros Ebers. Berlin, 1890.

Granville : Egyptian Mummies with observations on the Arts of Embalming, 1825.

"Within the past twenty years there has been a remarkable revival of interest in the history of medicine. Chairs or lectureships have been established in Continental, English and American Universities; Societies and Clubs devoted to the study of the subject have been started; instead of one there are now three or four Journals and the literature has been enriched with innumerable monographs and articles. A comparison of the volume of the *Index Medicus* for ten or twelve years ago with a recent one, shows how actively medicine is participating in the study of origins, and how much as a profession we are being influenced by modern historical methods." (Osler.)

In England the FitzPatrick Lectureship has been founded by a lady, Mrs. FitzPatrick, in memory of her husband, Dr. FitzPatrick, for the advancement of medical history in 1901. We have the following contributions: Dr. Payne: English Medicine in the Anglo-Saxon Times. FitzPatrick Lectures, 1903. Payne's

contributions are numerous : Introduction to the reprint of the Cambridge edition of Linacre's Latin Version of the *De Temperamentis* of Galen ; Contributions to the History of Epidemics ; Biography of Linacre in the Dictionary of National Biography.

Norman Moore : 1. John Mirfeld (1393) and Medical Study in London during the Middle Ages.

2. Dr. Edward Browne (1644-1708) and the Education of Physicians in London in the 17th Century.

3, 4. History of the Study of Clinical Medicine in the British Islands.

The FitzPatrick Lectures for 1905.

The Institute for the study of history of medicine at the University of Leipzig, as a memorial to Prof. Puschmann is a step in the right direction.

"The Charaka club was established in 1898 by members of the medical profession in New York interested in the literary, artistic and historical aspects of medicine. It is called after Charaka, author of the oldest extant work on Indian medicine."¹

But while so much is being done in Europe and America, we are quite apathetic in India. The neglect of the study of the history of medicine in this country is truly remarkable. One would naturally suppose that every student of medicine would receive some instruction regarding the process by which the science of the healing art has been gradually developed and built up. Such however is not the case. "By the history of medicine we do not mean medical antiquarianism or the dusty delights of the bibliomaniac, but the history of medical concepts. The study of the genesis and evolution of ideas is always interesting, and often most instructive ; dead seeds of

¹ B. M. J., April, 1905. "The Charaka Club and Prof. Osler," p. 728.

thought may be found in those intellectual tombs lining the walls of libraries, which may haply under favourable influences be quickened into new fruitfulness,"¹ The history of medical ideas should be thoroughly mastered for the right comprehension of the present state and tendency of medical thought. There is not a single chair of the history of medicine in the Indian Universities, nay, I am sorry to say, even in the English Universities. Far from learning the history of Indian Medicine, the graduates of the Calcutta Medical College scarcely know any history of the system that they practise. The *Bibliotheca Graeca* of Fabricus is full of information about the literary history of the Greek physicians, but from the *Bibliotheca Indica*, we cannot derive even a scanty knowledge about the Hindu medical science and medical authors.

The English translation of *Suśruta Samhitā* was undertaken by the Asiatic Society of Bengal in 1883. In that year, Fasc. I and II were published in the *Bibliotheca Indica*; but owing to the untimely death of the translator, Udoychānd Dutt, the publication had to be postponed. Its continuation by Aghorechunder Chattopādhāya, resulted in the issue of Fasc. III, in 1891; and then it was again stopped. In 1897, Hæruele, one of the past presidents of the Society, commenced the translation with short commentaries, *de novo*, but only Fasc. I was published. Since his time, nothing has been done as yet to complete the translation. India is the best field for study of the comparative medicine. Here we daily find practitioners of the healing art, well-versed in the lore of their respective systems of treatment;—European practitioners, Homœopaths, Hakims, and Kaviṛājes or Vaidyas. But this

opportunity is not taken advantage of by scholars. Literary contributions on Indian medicine are few and far between.

The Asiatic Society began the English translation in 1883; but during the last thirty years, through various causes, not even a section of the book has, as yet been translated. And I think that steps should be taken to finish it, without delay. The medical science of the Hindus has a claim upon the Society. Our worthy President in his Annual Address in 1908, remarks: "It must be conceded with some regret that the Society, in the past, has not done quite as much towards the investigation of the history and progress of Indian medicine as it has done in other directions. By an accident, which is somewhat unfortunate and inexplicable, the energies of our members, who have devoted themselves to philology and antiquities, have been steadily kept away from the history of Indian medicine. It is true that more than seventy years ago the Society published an accurate edition of the great Sanskrit work on Indian Medicine known as the *Suśruta*. It is also true that in our own generation attempts were made twice to publish a reliable English version of the same work, but, although the undertaking was begun on each occasion by a distinguished scholar, the attempt was unsuccessful and no progress worthy of any mention was made."

The book was translated into Arabic before the end of the 8th century A.D. It is called "*Kitab-Shawshoon-al-Hindi*" and also mentioned as "*Kitab-i-Susrud*" or book *Sushruta* by Ibn Abillsaibial. It has been translated into Latin by Hessler (1844-47) and into German, by Vellurs. It has been translated into the modern languages of India;

¹ The Hon. Justice Sir Asutosh Mookhopādhyaya, Kt.: Annual Address, Asiatic Society of Bengal, 1908.

but strange to say, it has not as yet been translated into English.¹

That an English translation is urgently wanted, cannot be doubted. In the First Indian Medical Congress, 1894, Brig.-Surg.-Lieut.-Col. T. H. Hendley, in his paper on the "Indian Systems of Medicine" remarks: "The subject is extremely interesting and our Indian members may add much to our knowledge of it by translating the best works."

The history of the publication of *Suśruta Saṁhitā* in original Sanskrit, it may not be out of place here to remark, shows a parallelism of circumstance. It was ordered to be printed by the Government of India; but the first volume and three-fourths of the second of the *Suśruta* having been printed, it was left unfinished, and was afterwards described as "an accumulation of waste paper" by the Government which had originally ordered, and had expended vast sums upon, their publication (Dec. 1835). The Asiatic Society of Bengal came to the rescue; and "with the spirit and zeal which has ever distinguished it, undertook, at their own risk, to complete the abandoned work, and so won the applause of the learned societies as the first publisher of the original *Suśruta Saṁhitā*." This edition had been exhausted long before and cannot be procured now.

There are a large number of unpublished manuscripts of medical works which deserve publication, not only on account of their historical and philological importance, but

¹ The work has recently been translated and published by Kunja Lal Vishagratna, a Kabirāja of Calcutta; but notwithstanding the laudable efforts of the translator, the translation has rather been free and even the Botanical names of the medicinal plants have not been added; factors which no doubt detract the value of a translation.

also on account of their medical value. Funds should be provided from public sources and our university should publish some of the important works. As an instance, I may mention the Bhela Saṁhitā, of which there is only a single manuscript in the Tanjore Library. The book is a storehouse of information on the ancient system of medicine as delivered by the sage Ātreya in his lectures to his pupils Agniveśa, Bhela and others. The treatise is thus older than the celebrated Caraka Saṁhitā in its present recension. The history of medicine is a record of observations, thoughts and achievements of a few great minds, and their records show the development and growth of ideas, beliefs, and doctrines. Steps should be taken to print the numerous manuscripts on medical subjects written in Sanskrit which exist in the libraries of India. The Sanskrit medical literature if published would fill a large library.

We often find quotations from Sanskrit medical texts, and of these quotations, it may be said with truth what Ogle, in the preface to his excellent translation of Aristotle's work "On the parts of Animals," says of the first of the biologists, that "the works are more often quoted than read, and it may be added, much more often misquoted than correctly quoted."

The value of a knowledge of modern languages to a physician had come to be understood, but many think that a knowledge of Latin, Greek and Sanskrit is not of any direct use to a doctor. I am an advocate for an increase in classical education, for the ancient literature possesses a certain educational value. Its cultivation is no bar to high scientific and technical studies. There have been many great savants in medicine who were also famous writers. The study of the dead languages is of the greatest utility in educating the mind,

and a sound elementary knowledge of them conduces to the proper understanding of the development of medical truths.

The ancient books in India are written in Sanskrit language. As the classical language gradually became a dead language, scientific writings and religious compositions became in course of time misunderstood. In the address to the graduates at the Madras University, 1898, we find the following remarks : "Those of you who have studied the learned shastras of your forefathers must have found ample room for opinion, that not only is modern sanitation compatible with caste, but that caste itself, although allied itself with religious observances, is a magnificent and elaborate system of sanitation But in the absence of the knowledge of Sanskrit in which these rules were conveyed, tradition, which has been the method of transmission from generation to generation, has led to no little distortion of the original dicta." Sir William Jones says : "Infinite advantage may be derived by Europeans from the various medical books in Sanskrit, which contain the names and descriptions of Indian plants and minerals, with their uses, discovered by experience in curing disorders : there is a vast collection of them from the *Cheraca*, which is considered as a work of Siva, to the *Rōganirūpana* and the *Nidana* which are comparatively modern."¹ For the accurate rendering of Sanskrit works on medicine into the modern languages an acquaintance with Sanskrit is indispensable.

Rai Bahadur Kanay Lal Dey² in his presidential address on 'Indian Pharmacology : A Review,' makes the following observations :

"It may not be unprofitable to glance for a moment at the ancient Sanskrit *Materia Medica* of a time long

¹ Vol. I, p. 358.

² Transactions of the first Indian Medical Congress, 1894, p. 525.

preceding the advent even of Mohammedanism in India, over seven centuries ago. I have quite lately found great pleasure and no small instruction in a research into the old Sanskrit works dealing with the classification of vegetables and the utilization of their parts in medicine as practised by the physicians of India of the Puranic era some thirteen centuries ago. The elaborate directions for the collection of drugs and their subsequent manipulation is, strange as it may seem to European minds at least, not by any means unworthy of the methods of to-day, and you will perhaps be as astonished to learn as I was to find that some of the mistakes of the most ancient of these Sanskrit writings survive in some of the best books treating of the indigenous drugs of India at the present time. They show the great progress which the ancient Hindus had made in the healing art. Minute instructions were given on every conceivable point, such as the gathering of herbs, preparation of medicines, etc. Annual plants were to be collected before the ripening of the seed, biennials in the spring, and perennials in the autumn; twigs were to be of the present year's growth: the roots to be collected in the cold season; the leaves in the hot season; and the barks and woods in the rains. There were no fewer than twenty-six forms of medicine, including powders, extracts and boluses, decoctions and infusions in water and milk, syrups, expressions, distillations, fermentations, and medicated oils, many of them crude enough in their exhibition but wondrously efficacious in the respective ailments for which they were designed. Not, however, until the quickening influence of British supremacy had been fully established in India was any notable attempt made, of which there is any record, to improve or to augment what was already known of the medicinal resources of this country. Sir William Jones' "Botanical Observations on Select Indian Plants," was

one of the earliest contributions in this direction : John Fleming's "Catalogue of Medicinal Plants" (1810), Ainslie's "Materia Medica of Hindustan" (1813 and 1826); Roxburgh's "Flora Indica" in 1820, and the labours of Wallich, Royle, and later, of Drs. F. J. Mouat and F. N. Macnamara and other ardent botanists did much towards resolving the chaos in which they found the vast mass of material at their disposal into some degree of scientific arrangement.

The gradual progress of Indian pharmacology, the widening and deepening of its influence, and its possibilities in contributing to the health and consequent prosperity of this vast Empire have been in complete sympathy with the gradual development of commerce, medicine, and science in this country. Clear of the mythology and superstition from which, not unlike the medical science of Europe, it evolved, but which lingers still in India, the science has in some measure at least demonstrated the marvellously liberal provision of curative and remedial agents within the reach of the teeming millions of this Empire."

The votaries of medicine should while actively pursuing their profession be learned in it and in the broad fields of learning other than in their own lines. As members of a learned profession, each of us should have an acquaintance with the thoughts and sayings of previous thinkers. It has been remarked in the *Suśruta Saṁhitā* that knowledge of many allied branches of science is highly useful to a student of medicine. *Suśruta* says¹: "Any one who

अथशास्त्रविषयोपपन्नानाद्यानामिहोपनिषत्तानामार्यवशात् स हिद्येभ्य
एव शास्त्रानमनुश्रोतव्यं कस्याप्यस्यै कश्चिन् शास्त्रे शब्दः स सर्वशास्त्राणामवरोधः कर्तुम् ।

एक शास्त्रमधीयानो न विद्याच्छास्त्रनिषर्गः ।

तस्मादहमुतः शास्त्रं विज्ञानीयाच्चिकित्सकः ॥

Suśruta Saṁhitā, I. iv.

knows only a single science, cannot have true knowledge of that science, hence a physician should be well versed in many other sciences besides the science of medicine." "When any subject which belongs to other sciences is referred to in this treatise, the student should know its meaning from the expositions by men learned in those sciences, for it is impossible in treating any science to avoid references to other sciences." For a series of ages—from the time very probably of Hippocrates to the Dark or Middle Ages—the tradition always existed that the physician should be a man of science trained after the best manner and according to the discipline of the science of the age. There are instances of eminent physicians who delved into literature and embellished it while engaged in serious investigations of medical problems. Linacre (the founder of the College of Physicians), Caius, Locke, Sir Thomas Browne (the celebrated author the *Religio Medici*), Rabelais, Galvani, Berzelius are well known names in the annals of medicine and cognate sciences. Brunfels, Fuchs, Gesner, Grew, and Linnaeus immortalized themselves by their labour in the field to open up botanical glories. Thomas Young deciphered the Egyptian hieroglyphics, formulated the Undulatory Theory of Light and was master of Latin, Greek, Chaldee, Arabic, Syriac, Hebrew, Persian and Samaritan. Black, Bell (the inventor of telephone), Gray, Owen, Aggasiz, Huxley, Helmholtz are familiar names to the students of science. The immortal Harvey, Sydenham (the Father of English medicine), Boerhaave, Haller, Mead, Morgagne, Andral, Laennec, and Rush will ever be remembered as eminent physicians and scholars. The names of Adams, the renowned translator of Hippocrates and Paulus Aegineta; Greenhill, deeply versed in Greek and Arabic lore; Boussemaker and Daremberg, the editors of Oribasius and other Greek and Latin classics; Littré,

the lexicographer and the learned editor of Hippocrates will be handed down to posterity as scholars whose names are emblazoned on the roll of fame. Simpson, Brodie, Brown, Trousseau, Malgaigne, Billroth, Sloane (the true begetter of the magnificent institution, the British Museum), and Holmes will be remembered as brilliant lights in their profession and famed for their intellectual cultivation. Some of these men were in the front ranks of literary giants. Many members of the medical profession have won great fame as poets. Goldsmith, Schiller, Keats, and Crabbe became immortal from the sweet art of the lyre. Thomas Lodge (the Elizabethan dramatist), Akenside, Haller (the great physiologist), Moir ('Delta' of Blackwood), Oliver Wendell Holmes ('the autocrat, professor and poet at the breakfast-table'), and Thomas Gordon Hake were equally famed in literature and art. Fracastorius (the hero of whose Latin poem "De Morbo Gallico," gave his name to Syphilis), Sir Samuel Garth (who sang the wrath of the physicians against the apothecaries), Smollet, Armstrong, Erasmus Darwin (author of the 'Loves of the Plants'), Leyden, Aveling, Bridges, Weir-Mitchel (the author of The Mother and other poems), Conan Doyle (the creator of Sherlock Holmes 'the Newton of detectives,' Dr. Watson, the hero of his detective stories, and Dr. Cullingworth "the Napoleon of quacks" in "The Stark Munro Letters"), and others will ever be remembered for their attainments in poetry and science. Da Costa, in his inaugural address at the opening of the Harvard Medical School in 1898, remarks: "He (the scholar) was never more needed than now when every atom of discovery is heralded as of prodigious importance and as sure to influence immediately the laws of the universe . . . It is the scholar whose knowledge teaches him to appreciate correctly the different fads and 'isms'."

which are constantly cropping up and which he recognises as old errors with new faces." Indeed among medical men of equal calibre as regards their skill, the physician with the widest general culture proves to be the better man.

In the recent Calcutta University Commission Report (1917-19), it is no doubt gratifying to find recommendations for the chairs of Pharmacology and of the History of Medicine for our University. As regards funds for the establishment for chair of History of Medicine, the members of the Commission have expressed the hope that private generosity will furnish the necessary funds. History of Medicine has not been prescribed as a subject in the curriculum of studies for the candidates for medical degrees of the University. So there is, we are afraid, very little chance of the establishment of such a chair at an early date. We reproduce here the recommendations from the Report of the Commission :

21. *Proposed Chairs of Pharmacology and of the History of Medicine.*—We recommend further the establishment of a chair and laboratory of pharmacology, and of a chair of the history of medicine.

The chair of pharmacology should, we think, be provided by the Government in connexion with the Calcutta Medical College. At the present moment there is a chair of materia medica which is held jointly with the chair of clinical medicine. It would be suitable in future to relieve the professor of clinical medicine of the subject of materia medica and to unite that subject with the chair of pharmacology. We think the chair of the history of medicine should, if possible, be established by private benevolence and should be a university chair attached to the Calcutta Medical College; and the lectures, or at any rate certain courses, should be open to the general public. We have in Chapter XXXIV, paragraphs 112-120, explained the

procedure which we regard as suitable for the selection of occupants of university chairs tenable at a particular college, and we think this method should be used in connexion with the chair of the history of medicine.

22. *Use of the above-named chairs for investigations in connexion with the Ayurvedic and Unani systems.*—The chairs of pharmacology and of the history of medicine are desirable on general ground; but they are also desirable because it is in connexion with their teaching that effect should be given to the demand, fully justified, that the ancient systems of Indian medicine should receive attention by the University of Calcutta.¹

23. *The University cannot train students in the Ayurvedic and Unani systems.*—It is clearly impossible that we should ask the University to undertake to train students on systems which ignore what has been done in science and medicine for centuries, although they have preserved valuable knowledge. As Sir Sankaran Nair, the Member for Education, pointed out in a speech of March 24th, 1918, at the Ayurvedic and Unani Tibbi College at Delhi, the study of modern sciences is indispensable for medicine.

24. His Excellency Lord Pentland struck the same note in a speech recently delivered at the opening of an Ayurvedic hospital in the Cochin State.²

"Medicine," he said, "whether it be called Ayurvedic, Unani or western, must follow the same methods and the same aims and submit to the same tests; . . . any system of medicine must be correlated with every advance in the allied sciences such as chemistry and physiology."

Lord Pentland further pointed out the necessity for examining and standardising the drugs used in the indigenous systems.

¹ See also Chapter XLII, on Oriental Studies, paras. 6-8.

² Reported in the *Indian Medical Gazette* for March, 1918.

25. There is an obvious and promising desire at the present moment among the numerous adherents of these systems for closer touch with modern scientific methods. In time no doubt they will be able to make available for the practitioners of western medicine the traditional knowledge which is of real value; and will reject, as western medicine continually rejects, those theories which are mere survivals, and cannot stand the test of experience. The distinction between Indian and western 'systems' of medicine will then disappear.

26. *Chair of Pharmacology and Materia Medica.*—Although pharmacology figures as a subject of the university curriculum there is no professor of pharmacology in Calcutta, nor we believe, elsewhere in India. It is only right however to point out that pharmacological investigations of the first importance, on emetin and other substances, have been carried out in the pathological department by Sir Leonard Rogers. But the subject is one which should be provided with a separate department, similar to the departments in London, Cambridge, Edinburgh and other universities, and in such a department it would be fitting that a systematic investigation should be undertaken of the drugs used in the Ayurvedic and Unani systems, as well as of the other drugs furnished by the immense variety of the natural products of India. As pointed out in paragraph 21, we think that the subject of materia medica should be detached from the chair of clinical medicine and should be dealt with by the professor of pharmacology.

27. *Chair of the History of Medicine.*—The chair of the history of medicine of which we propose the establishment should deal not only with the history of medicine in India, but with the history of medicine generally, and we think it essential that it should be held by a qualified medical man. It is only in the light of modern medicine

that ancient systems of medicine can be judged in their true perspective and relationships. The subject is one of importance not only for medicine but for the history of science and civilisation generally. In a number of European universities, notably the University of Paris, there is a chair of the history of medicine; and there is a growing sense of the necessity, in these days of specialisation, of establishing teaching which shall give to the specialist a wider view of his subject. Sir William Osler, the Regius Professor of Medicine in the University of Oxford, has drawn attention to this aspect of the matter in his interesting preface to the recently published *Studies in the History and Method of Science*, edited by Dr. Charles Singer,¹ which deals largely with the history of medicine. We hope that private generosity may furnish at an early date the funds for the establishment of such a chair as we suggest.

The question may be asked: What is the importance of the study of the history of medicine? Let us consider the advantages of such a study in detail.

I. Ferdinand Hoefer in the Introduction to his valuable *History of Chemistry* says: "I have always thought that the best method of popularising scientific studies, generally so little attractive, consists in presenting as in a panorama, the different phases a science has passed through from its origin to its present condition." "History," says Gibbon, "is indeed little more than the register of the crimes, follies and misfortunes of mankind." In general history, the scholars try to unravel the factors which led to the downfall of ancient empires such as those of the Greeks, Romans, Hindus, Arabs and Moguls, they take delight in tracing such downfalls to errors and mistakes of cruel tyrants; but in the history of sciences, mistaken theories and erroneous

¹ Published by the Clarendon Press, 1917.

facts are thought unworthy of their scholarly instincts. But errors of king, and false theories of scientists are equally important for the progress of the world in-right direction. "No science nor, indeed, any single form of knowledge can be properly appreciated apart from the records of its evolution ; and it is as important to be acquainted with the errors and misleading theories which have prevailed in regard to it, as with the steps by which real progress has been made" (Wotton). Fuller remarks¹ : "History maketh a young man to be old without either wrinkles or grey hairs ; privileging him with the experience of age without either the infirmities or inconveniences thereof. Yea, it not only maketh things past present, but enableth one to make a rational conjecture of things to come. For this world affordeth no new accidents, but in the same sense wherein we call it a *new moon*, which is the old one in another shape ; and yet no other than that hath been formerly. Old actions return again, furnished over with some new and different circumstances." Moore² says : "The study of history is most worth pursuing when the consideration of the past can be made useful to us in the present. The lesson, "*Ars longa, vita brevis*," is plain enough wherever we contemplate the attempts of men to learn and to teach medicine. Further than this, we may learn that only those subjects become really valuable to the student, in which he has sought out things for himself, so that his knowledge does not rest on the dicta of a teacher.

"Last, we may conclude that medicine in itself, with its essential preliminary, anatomy, contains sufficient opportunities of training in every form of observation and of logical deduction from what is observed, and that, for the

¹ B. M. J. 1902.

² Norman Moore ; Fitz-Patrick Lectures : Medicine in the British Isles, pp. 82-83.

rest, a mind which has been opened by a sound literary education is that best adapted to follow the lifelong study of medicine which is the duty of every physician. These are the conclusions to which I have been led by a study of the history of the education of physicians in London from the time of John Mirfeld to that of Edward Browne, from the Middle Ages to the time when the methods of study which we now follow began to be used." The history of any science is always worthy of study and attention. In medical science, the students often overlook and lose sight of the patient labours of the early workers, many of whom laid the foundation of discoveries that have since proved of inestimable value to the civilised world. Many of the empirical methods of modern times may be traced a long way back. Allechin, in his Harveian Oration, 1903, remarks that "it is easy from our present standpoint to overlook the help that the advances made by these workers (Gilbert, Glisson, Willis, Young, Sydenham, Heberden, Hunter, Prout, Bright, Watson, Parker, Jenner, Harvey, Gull, Clark, and Reynolds) contributed to the general progress; nor are those suggestions which proved to be erroneous altogether to be disregarded, since in their refutation the right way often became manifest." The mediciner, even in ancient times, is advised to be "skilled in the judgment and science of the wise and skilful physicians who have preceded him." "Professor Hamilton said that even in medicine, history repeats itself. The pathology of our forefathers was called 'humoral pathology.' It was supposed to have received its death blow by 'Cellular pathology.' Recent discoveries would seem to point to a revival of the humoral pathology of the past. The more we became acquainted with diseased processes,

the more we are convinced that no one system, however plausible, would explain the whole of them."¹

The object of the historical study of medicine is to describe the process by which the principles of medical science have been wrought out in the history of the world from prehistoric times till the present day. Many ancient and modern scholars have worked in this wide sphere.

"A system cannot be thoroughly comprehended until we know all the consequences which have actually followed, and which it is the business of history to trace from it in the application of principles."² The student of medical history must make himself intimately acquainted with general history and trace the influence which the science of medicine has exerted in the historical development of the civilized nations.

I reproduce here a letter addressed to the editor, of the British Medical Journal in 1886. The letter speaks for itself and its suggestion may be availed of with profit, in prescribing subjects of examination for medical degrees.

HISTORY OF MEDICINE AS A BRANCH OF PROFESSIONAL EDUCATION.³

SIR,—May I suggest, while the scheme for granting medical degrees for London students is still under consideration, that a very suitable item in the requirements for a title which should be something more than a mere licence to practise, would be an acquaintance on the part of candidates with the history and progress of medicine.

One is not disposed to deny that a man may be perfectly capable of opening an abscess or expressing a placenta,

¹ B. M. J. 1893, Vol. II, p. 1122.

² Horn: History of Jurisprudence, p. 160, 1866.

³ B. M. J., Vol. II, p. 393, 1886.

without knowing anything of the theories of the medical schools, or the vagaries of bloodletters and water-doctors; but it is certainly to be desired that a man who aspires to the higher ranks of the profession should be conversant with, at any rate, the more salient facts which have advanced or retarded the progress of medicine in the past.

Such knowledge is not by any means without its value. History repeats itself; and one of the surest methods of avoiding error in the present and in the future is to cultivate an acquaintance with the mistakes of those who have preceded us on the difficult and uncertain path of progress and research.

The subject is one which might well form part of the classical education to be exacted from future aspirants. At present beyond a vague notion of a gentleman called Hippocrates, and of another called Galen, most medical men know little, and would be sorely plagued if a patient more than usually erudite ventured to allude to the subject—I am, sir, your obedient servant,

ALFRED S. GUBB.

There is no doubt that nowadays the history of medicine has become more attractive. The University of London had lately added the history of medicine to the subjects of examination for the M. D. degree. A chair of the history of medicine had been founded in the University of Rostock.

II. "For the student the educational aspect is of incalculable value, since medicine is best taught from the evolutionary standpoint. What a help it is to give early in his career a clear view of the steps by which our present knowledge has been reached! And yet in the present crowded state of the curriculum, it seems very undesirable

to make the history of medicine a compulsory subject. An attractive course will catch the good men and do them good, but much more valuable is to train the mind of the student to look at things from the historical standpoint" (Osler). The graduates in medicine, surgery and midwifery embark on their professional career without any appreciation of the history of the subject.

Students of our universities know little of medical history. They speak of *facies Hippocratica* but they are ignorant about the works of the renowned Father of Medicine. His works are more often quoted and talked about than read; indeed many practical surgeons are not ashamed to own themselves ignorant of the traditional knowledge of the Asclepiadæ as crystallised by Hippocrates. They do not know that Colchicum is named after Media of Colchis, that Sertuner adopted the term "Morphinum" from "Morphæus," the son of the god of sleep (Somnum), that Achelia Mitford plant was discovered by Achilles, that the use of Acetum Scillæ and Aniseed we owe to Pythagoras, and of hellebore and iron to Melampus. To them, such terms as Atropa Belladonna, Centaury, etc., are words without meaning. They never think of the stories that gave birth to such words. They are ignorant of the facts that Themison first distinguished rheumatism from gout, Menacretes invented the diachylan powder, Avicenna invented the method of silvering and gilding pills, Oribasius popularised the necklace method of treatment and Sir Theodore Mayerne introduced calomel and blackwash in medical practice, though the former is alleged to have been known in India many centuries before it became known in Europe. They do not know how much the present system of medicine owes to the Arabs, and the indebtedness of the latter to the Greeks and Hindu systems of treatment. They scarcely know the names of Geber,

Rhases, Avicenna, Paulus, Celsus, and Vāgbhaṭa. They know little of Goulard, Glauber, Scheele, Sydenham and others. They will be astonished to learn that the first London Pharmacopœia adopted nearly half the Formulary of Mesue. They do not know the history of temple sleep, the origin of royal touch, cramps of rings, and the abracadabra mystery. Of the influence of ladies in the names of drugs, there are interesting accounts. Myrrh is named after Myrrha, the daughter of Cynirus, King of Cyprus; Mint is after Mentha; Nepenthes was the drug Helen mixed for Telemachus in a 'mirth inspiring bowl'; Atropa Belladonna—so called from Atropa, the eldest sister of the Fates, who cut the thread of life, and from Belladonna—so called from the Spanish ladies who made use of the plant to dilate the pupils of their brilliant black eyes; Colchicum from the inhuman Medea of Colchis; Cinchona is named after the wife of the Viceroy of Peru, the fourth Count of Chinchon; and the otto or atar is named by the famous Nur Jahan, who on the occasion of her marriage with Emperor Jahangir, observed and collected the scum on the surface of rose water in a canal in the garden of the palace and named it Atar-Jahangiri. To Cleopatra is ascribed a few prescriptions, and two writings, one of which *Diseases of Women* has survived. The knowledge of these facts would not of course relieve the suffering humanity, but surely they add some amusement and interest to the study of materia medica by students. Celsus has preserved some of the sayings of the empirics: "Diseases are not cured by talk but by drugs"; "The important question is not what causes disease but what dispels it"; but surely we live in a better age, and the etiology of diseases and history of drugs must be learnt by a scientific physician.

“Medicine preserves, in its terms and names, much that carries us back beyond its written history to the days of

mythology, and we still see foot-prints in our phraseology enabling us to trace the growth of our calling through fetichism, miracle cure, and astrology, to a more rational system. We, for instance, find the names of the Olympic gods preserved and variously applied through medicine. Saturnine poisoning reminds us of Saturn, and ammonia recalls Jupiter Ammon. We almost daily handle vulcanized rubber instruments, while Mercury, the messenger of the gods, now serves us. The word Hygiene is a monument more enduring than brass to Hygiea, the daughter of Esculapius, the god of medicine. The tendo-achilles recalls the hero of Homer's Iliad, and also the delusion of ancient surgeons, that wounds here were fatal. Lunacy comes to commemorate the fact that our ancestors believed the lunatic's brain had been acted on, and that his mind was controlled by the moon. The word artery antedates Harvey, and tells of a time when these vessels were supposed to carry air, and not blood, while the ever-present calomel, derived from Greek words meaning a good or beautiful black, tells of a time when calomel was æthiop's mineral, or hydrargyrum cum sulphure, and not the white chloride of to-day. So names live after the reason for them is forgotten.

In such terms as obstinate, persistent, malignant, or when we say a disease attacks, invades or manifests itself, we use terms which once carried the idea that disease was an entity, endowed with certain passions and vindictive purposes, and that the doctor's province was to take the patient's side in the deadly strife ¹

It seems curious that while the study of history of other branches of learning are thought essential for the liberal education of the young aspirants to fame in their

¹ Dickinson: Delusions in Medicine. Annual Address delivered before the Medical Society of Virginia, 1902.

respective callings, medicine is the only subject, the historical aspect of which is equally neglected by the professors and students alike. "No student in divinity considers his equipment complete without a course of Church history; no student of law who aspires to the higher grades of the profession denies himself a survey, at the hands of a competent lecturer, of the successive phases through which the conception of right and its practical applications have passed. Medicine alone among the sister professions permits its votaries to leave its hall without that study of its past which "intelligent curiosity" alone would of itself seem to impose as at once a pleasure and a duty."¹

III. The knowledge of the history of medicine is exceedingly useful for those who like to carry out research work in some departments of the science. "To take stock," says Mr. Knaggs,² "as it were, from time to time of what has happened in days gone by is not without its help in enabling us to estimate truly and direct the progress in the present, and it even has its bearing upon the prospects of the future. It is not wise in any department of knowledge, be it history, science, art, or any other, to confine one's attention simply to the present; we should seek to draw wisdom from our stores of the past to influence our actions in the present, and our judgments for the future." One must know the amount of progress achieved in a field of enquiry by scholars, before he can attempt any serious investigation on the subject. Without such knowledge, much of his labour might be misspent on questions already solved by others in the field. As an instance I quote here the words of Professor Bier: "It is well known that the cupping-glass is amongst the oldest therapeutic remedies. But when I lately—though, alas!

¹ Lancet, Vol. II, Sept. 7, p. 654. 1895.

² A Reminiscence of Forty Years, Lancet, Vol. II, p. 1425. 1893.

much too late—looked up its literature, I was not a little astonished to learn how extensively and variably this venerable instrument has been used by all peoples of the world, by the lowest primitive and highest civilized nations; its history extends to our day. If I had studied the literature at the right time, we could have saved much labour, for I learned that numerous difficulties—to overcome which, we had much trouble—had been solved long ago. I furthermore learned that the idea of sucking out pus with the cupping-glass, which I believed was originated by me, had been in use in olden times, and in certain instances has been practised repeatedly.”¹ The German historian Karl Sprengel justly points out that many remedies re-discovered in modern times were referred to by Dioscorides. Among these are the application of wool-fat to wounds, external applications of castor oil, male fern against tape worms, elm bark for eruptions, horehound in phthisis, and lac for ulcers. Bottini (1837-1903) anticipated Lister by publishing a work on the use of carbolic acid in surgical operations; and he was one of the first to recognise the rôle played by parasitic organisms in the etiology of pathological conditions. Servetus and others seem to have anticipated the immortal Harvey in the discovery of the circulation of the blood, although without apparently realising its importance or significance.

Belloste (1654-1730) “was one of those writers whom Verneuil called the minor prophets of surgery. That distinguished surgeon said that if one had the curiosity to look into forgotten old books, it would be found that the majority of important discoveries, the fruits of which we now enjoy, belong not to the celebrities of the profession, but to men of whom the world knew little while they lived,

¹ Bier's Hyperæmia, Translated by Blech. 1909, pp. 79-80.

who worked far away from the great centres of intellectual activity, and who never wore the professorial purple. In Belloste's day the practice in dealing with wounds was to keep them widely open with tents so that discharges might escape and remedies might be applied to every nook and cranny in their depths. Where suppuration was profuse the dressing was changed every day, sometimes twice a day, to the grievous distress of the patient. Belloste strongly denounces these "cruel methods," and teaches that wounds should be dressed "gently, quickly and seldom." He observed that the admission of air to wounds had a bad effect; this he explained by the fact that the atmosphere was full of very subtile particles or atoms which he suggested might produce "very dangerous corruptions, when they attach and agglutinate themselves to sensitive parts." "Evidently," he says, "the 'corpuscles of the air in hospitals are more charged with subtile and caustic particles than that of other places; and owing to them, unless great care is taken, wounds become chancreous, putrid, and often fistulous and incurable. Hospitals long retained the foul smell engendered by patients. The cause of this, in Belloste's opinion, could be nothing else than the "impure atoms" which adhered to the walls, and which obliged those who wished to live in the same place to cover them with plaster or chalk for the purpose of preserving themselves from the infection that might arise from their "morbific ferments." If, he argues, these atoms have sufficient tenacity, consistence, and fermentative virtue to attach themselves to a hard, even body, such as a wall, and to remain there several months without losing their foul smell or their disposition to erode and putrefy, what will they not do in exposed wounds, where the fibres are always moist, glutinous, delicate, and without support? With the substitution of

the word "germ" for "atom," these passages seem to show that Belloste's prophetic soul dreamed dimly indeed and vaguely of things to come."¹

A curious illustration is supplied by Dr. James Johnson in the narrative of his visit to Pompeii: "The Dilator or Speculum, for which Mr. Weiss of the Strand obtained so much repute a few years ago has its exact prototype in the Bourbon Museum at Naples. The coincidence in such an ingenious contrivance would be absolutely miraculous; but unfortunately there is a key to the similitude, which destroys the charm of astonishment. A crafty Frenchman imitated from memory, and with some awkward deviations, the Pompeian Speculum, and passed it off as his own. Weiss improved upon the Frenchman, and hit upon the exact construction of the original! Many modern discoveries may probably have originated in the same way."² The instrument commonly known as Hey's saw was first invented by Avicenna, and Civial was anticipated by Ammonius, a lay lithotomist, who employed an instrument for breaking stones in the bladder, in the time of Hippocrates.

"In the Papyrus Ebers, which is a copy of an Egyptian medical compilation already old in the time of Moses, there is mention of polyuria, and it is hard to conceive that such a marked departure from health could at any time have escaped observation; yet no notice of it is to be found in Greek writings earlier than those of Aretaeus of Cappadocia (*circa* A. D. 150), who is supposed to have been a contemporary of Galen, and was probably also a Roman physician. His description, like that of the unknown Egyptian priest, or that of Galen, who wrote at

¹ B. M. J., Nov. 4, 1905. Vol. II, p. 1220. Dr. H. Folet: *Echo Medical du Nord*. July 22nd, 1905.

² Miller's *Surgery*, p. 11, foot-note.

length upon the disease, lays stress only on the polyuria and thirst. The important point that the urine contains sugar appears to have escaped the notice of all early European writers; nevertheless, if we trust some passages of the Ayur Veda (*circa* A. D. 500?—500 B.C., see my "Surgical Instruments of the Hindus," Vol. I, Introduction) it was known at that time to the Hindus. In a Cingalese writing of the fifteenth century diabetes is undoubtedly referred to as "*Madu mebe*" or "*honey urine*," so that in this respect European knowledge lagged sadly behind; for it was not until 1679 that our countryman Willis mentioned that the urine of diabetes has a sweet taste. A century later Dobson of Liverpool demonstrated the presence of sugar.¹

IV. "As a study, the history of that branch of science which has to do with healing has peculiar attractions. With foundations in anthropology medicine has close affiliations with most of the theologies, many of the philosophies, and with the pseudo-sciences of alchemy and astrology. To trace its gradual evolution, to study the relations which it has borne to the intellectual movements at different periods, is the work of scholars trained in the modern methods of research" (Osler). The study of anthropology and medicine presents us with many interesting problems. The liability of the different races of men who differ in colour of their skin, to diseases, in a varying degree, can only be understood from a study of the geographical distribution of diseases among the races of the world and of the history of the many epidemics that overran the face of the earth in the past ages. Ainhum, goundou, sleeping sickness and the filarial affections are confined mainly to the Negro race, but they are insusceptible to

¹ Diabetes Mellitus. By R. Saundby in *Albany System of Medicine* Vol. III, p. 167.

yellow fever, malaria and piles. West-Indians and Africans are however susceptible to yellow fever when they return to their countries from a long residence in temperate climates. But in general, they are at all times less liable to violent attacks than Europeans or North Indians. The Negroes are exempt from piles and from varicose veins, and comparatively immune from cancer and syphilis ; they are generally free from gout, the disease of the civilised man. The Dutch are prone to mesoblastic and chiefly vascular degenerations ; and we find the neurotic tendencies of disease as a whole among the French race. These facts can only be verified by the study of the geographical history of the diseases. Clemow says : " A study of medical geography is not complete—and may indeed be misleading—unless supplemented by a study of medical history. Hardly any disease has a permanent geographical distribution. Even those diseases which are practically ubiquitous vary from time to time in their virulence and in the number of their victims. But it is particularly in the large class of ' epidemic ' disorders that a study of their history becomes of the greatest interest and value."¹

The knowledge of the medicinal properties of herbs and roots in the treatment of the sick, the surgical treatment of wounds and the corrections of dislocations or fractures of bones can be traced even amongst primitive nations,—and we can learn the instructive beginnings of the science of medicine.

The study of the history of diseases is an important part of a survey of the present condition of the world. It should be compared with a careful estimate of the past. From scanty materials, the historian is required to reconstruct the earlier ages of human history and to trace the

¹ Albutt's System of Medicine, Vol. I, p. 113.

development of medical science of to-day. The student of history who studies the racial peculiarities of diseases, the true origin of epidemics, the influence of heredity, and the natural classification of the morbid conditions, must be skilled men in a very important aspect of medical science which has not as yet received the consideration it deserves—the history and geography of diseases. The importance of the subject should be thoroughly realised especially in England, by virtue of her worldwide dominions. If there be any nation on earth, to which the subject of history of medicine should be peculiarly its own, it is the English who have the best opportunities of supplying the data required for the purpose. Sir George Campbell, one of the late Lieutenant-Governors of Bengal, observed with pride, but without the least exaggeration, at the meeting of the British Association for the Advancement of Science in 1886, “in our vast empire we have every race and every shade, every stage of progress, from the lowest to the highest, every institution and every method of living. As rulers, as explorers, as merchants, as employers of labour, as colonists, we come into the nearest contact with almost every people and every tribe on the face of the earth, we are indeed a people who, if we make but the most moderate use of our opportunities, may bring together such a mass of knowledge as to leave nothing wanting.” India as a part of the British Empire has peculiar advantages for the study of the growth of the medical science. “India is in some sense an epitome of the world,” and Bengal may be said to be an epitome of India.

V. The study of history of medicine is “a useful pastime for the leisure moments of busy men who take an interest in the history of the profession local or general. Both in England and the United States this has tended more towards the biographical side of medical history,

and many valuable monographs have been published." Who would not sympathise with the sorrows of Dr. Morton whom Lecky declares in his History of European Moral to have done more for the real happiness of mankind than all the moral philosophers from Socrates to Mill,—the inventor and revealer of anæsthetic inhalation, and who passed the later years of his life in agricultural pursuits, supplying an instance of national ingratitude ! His soul rests in peace :

" Not poppy, nor mandragora
Nor all the drowsy syrups of the world
Shall ever medicine these to such sweet sleep."

Shakespeare.

How much Jenner suffered from the incredulity and ridicule of, and direct and determined oppositions from, the various members of the profession who stigmatised his innovation as "a gross violation of religion, morality, law and humanity." Antiseptic surgery has robbed operation of its after-complications; as anæsthetics have averted and annuled pain of the surgeon's knife, but it took years of patient toil to gradually eliminate fallacies and establish and teach the conditions of success. None who have not read Lister's early contributions, and the literature they called into being, can realise the difficulties that he had to overcome, in his epoch-making work on Hospitalism and Wound Treatment. The remark of the butler, who found Simpson lying in his room apparently unconscious, "He'll kill himself yet wi'tha experiments," gives us a graphic account of the hardships and perils incurred in his endeavour to make the severest surgical operations painless. Yet in 1889, only seventeen years before this great discovery, Velpeau said : "All research for an agent to destroy pain in operation is a mere chimera and unworthy

of further considerations." It is no doubt interesting to learn that such an eminent benefactor of men, as immortal Harvey, after his celebrated book on the "Circulation of the Blood" came out, "fell mightily in practice; 'twas believed by the vulgar that he was crack-brained, and all the physicians were against him." As recreation, busy practitioners should study the biographies of the medical worthies. It has been said that Professor Osler's recreation is bibliography.

As a relief to the pressure of learning, the doctor should turn to literature and the arts, especially to drawing and other extra-professional pursuits. From a study of the biographies of celebrated medical men, we may form an idea of the different lines adopted by them as their hobby. It is a mistake to suppose that medicine is a mere mechanical training. The training in medicine is a liberal education. It develops a man's powers in whatever directions those powers are later to be utilised.

As a 'side line,' physicians have derived personal pleasure, and secured benefit to humanity from cultivation of fascinating diversions, entirely different from those required in their daily vocations. We should remember that Apollo was god of healing as well as leader of the Muses. Avicenna became the "Father of Geology" and Linnæus, the "Father of Modern Botany." Stenson revelled among fossils, Auenbrugger and Boerhaave cultivated music; Henle played the violin. Many embellished literature. Haden, Fridenburg and others have distinguished themselves as exponents of etcher's art. William Hunter, Scarpa, Henry Thompson, and Shradly found joy in painting pictures. Canon Arnot, like St. Luke, entered the ministry. Dr. W. T. Grenfell became celebrated as "Grenfell of Labrador." Keats, Goldsmith and Bridges became celebrated poets, Lord Elkerston (formerly

Dr. Walter Foster), Dr. Jameson (Dr. Jim, the Premier of the Dominion of South Africa), Sir George Robertson (the hero of Chitral), Dr. George Ernest Morrison (the official political adviser of the President of the Chinese Republic), Bayol (the Honorary Colonial Governor), Dr. E. R. Taylor (the Mayor of Sanfrancisco during the most perilous times) celebrated themselves as doctor-politicians. Sir Seymour Haden (President of the Royal Society of Painter Etchers), and Mr. Henry Tonks (Asst. Professor at the Slade School of Fine Art) are instances of doctor artists. Sir Charles Wyndham became an acknowledged head of the dramatic profession.

Sir Joseph Hooker (the Director of Kew Gardens) and Professor Huxley began their career as naval surgeons and became eminent men of science. Dr. Harvey W. Weley was the great chemist who denounced the food adulteration and the selling of spurious soil fertilisers as a crime. Dr. Alexander E. Bell became famous as the inventor of Telephone, that is, for the creation by means of the voice of undulations in an electric current. Livingstone, Mungo Park, Kirk, Rae and Emin Pacha are well-known as explorers. Mr. Stephen Paget acted as the Secretary of the Research Defence Society and so did incalculable good to the cause of science. These eminent physicians have writ their names large in the history of medicine. Many have been enthusiastic photographers. Some have interested themselves in collection of prints, microphotographs, books, and coins. Many devoted themselves to horticulture, floriculture, agriculture and cultivation of plants. Many medical men have gone into the breeding of high grade dogs.

VI. A study of the history of a science helps materially in the formation of character. When students leave their colleges and hospitals, the young graduates are

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imbued in their mind with an idea that their education is complete. But if they realise the greatness of intelligence of the worthies of the past and their share in the progress of science, the effect would be "to modify their estimation of self," and to "help to encourage that modesty of bearing which is ever a noble feature in the perfect character of all great and good men."¹ "I often think we are too apt, in the preoccupation of the present, to forget what a great amount of work was accomplished by our predecessors and how completely, in many instances, they fashioned the pathway which has led to many of our modern achievements. Only to mention the honoured name of Celsus, we find several of the operations described by him are still performed, and he has recorded his experience, or rather the experiences of his time, with a force and precision that never probably have been surpassed. Some perhaps may say, 'What have we to do with ancient surgery? We are practical men; give us the surgery of the present day.' But much of the practice of the present is founded on the labours of the past, on the thought and the toil of those who are no more :

Vergiss die treuen toden nicht.

There is some tendency to displace the leaders of the generations who have gone before from the pedestals on which the admiration of their contemporaries has placed them. The traditions of the past are, I suppose, a part of the discipline of the surgical mind."²

"Above all, he will have learnt from the lessons of the past the one great truth that, however important a

¹ Knaggs, *Lancet*, 1893, Vol. II, p. 1425.

² An Address on the Old Surgery and the New. Sir W. Mac Cormac, F.R.C.S.; B.M.J. 1888, Vol. II, p. 895

discovery he may imagine he has made, it behoves him to be modest in the face of what has been done before him.”¹ It is highly necessary for a physician to practise self-control and to be of firm and genial manners.

The spirit of disdain for the thoughts and beliefs of the ancient masters of medical science may deprive the future generations from the delight in tracing the growth of the science—a subject which may prove of intense interest to the medical profession.

The study of biographies has been used from time immemorial as an aid to the formation of character by stamping on the minds of students moral impression along with interesting ideas.

Idle pretence of superior success, haughty assumption of power of the instruments of precision for diagnosis and treatment, foolish confidence in vague statistical reports, are unworthy of the graduates of medicine. Be honest and straightforward. Then let the future take care of itself. It is neither always safe nor desirable to discard our old weapons as rusty and futile. Always remember that our present position is the outcome of the struggle of the different schools of medicine, the dogmatists, the empirics, the methodists, the galenists and a hundred other sects. It often happened that one theory was loudly proclaimed as excellent until another just as fallacious had arisen to overthrow it.

“It appears to me,” says Adams, “that, at certain periods of ancient times, the standard of professional excellence was such as would not easily be attained at the present day, with all our vaunted improvements in knowledge; and that many of those early masters of our art were

¹ Sir Felix Semon: *Relations of Laryngology, Rhinology, and Otology with other Arts and Science*, B.M.J., Vol. II, Sept. 24, 1904, p. 717.

distinguished for varied stores of erudition, an ardent love of truth, and an aptitude to detect the fallacies of error, such as few of us even now can lay claim to. The Father of Medicine held that, to become an eminent physician, it was necessary not only to be well acquainted with the structure of the human frame, but also to be skilled in logic, astronomy, and other sciences (De Aer. Aq., etc.); and of him it may be truly asserted, that he cultivated the art of medicine upon the strict principles of the inductive philosophy more than two thousand years before the world gave Lord Bacon the credit of introducing this method of philosophising. His devoted admirer and follower, Galen, was evidently the very *beau ideal* of an accomplished physician; skilled in all the sciences of the day, in logic, mathematics, rhetoric, and the first philosophy; to all these ornamental branches of knowledge he added a minute acquaintance with anatomy and physiology; a practical experience with the phenomena of diseases as diversified by climate, situation, and the varied modes of life; a singular perseverance in collecting facts; and an extraordinary ability for generalizing them. The contemporaries of Celsus regarded him not only as well acquainted with medical literature, but also as being minutely skilled in every elegant and useful science which was known and cultivated at that remarkable period. And Rhases, the Arabian, requires of him who aspires to eminence in the medical profession, that, instead of wasting his earlier years in frequenting musical and drinking parties, he should have spent them in conning over the valuable records of ancient wisdom. "But the Sciolist," says he, "who gives himself out for a proficient in the art, while he has scarcely even a smattering of learning, will never be deserving of much confidence, nor ever attain any great eminence in his profession. For it can never be that any individual, to

whatever age he may reach, should be able to comprehend in his mind a subject so vast and diffuse, except by treading upon the footsteps of the ancients; since the boundaries of the science far exceed the narrow limits of the life of man, as is the case with most of the liberal arts as well as with medicine. The number of authors is not small by whose labours the art has attained its present growth; and yet one may hope to master the monuments of their industry within the space of a few years. Let us suppose that, in the course of a thousand years, a thousand authors had made improvements in the profession; and then a person who has diligently studied their works may improve his mind as much in knowledge as if he had devoted a thousand years to the study of medicine. But, when an acquaintance with former authors is despised, what need be expected from the efforts of a single person? For, however much he may surpass others in abilities, how is it to be supposed that his private stock of knowledge should be at all worthy to compare with the accumulated treasures of antiquity? In a word, he who has never turned over the pages of the ancient physicians, nor has formed to his mind a distinct conception of the nature of diseases before he enters the chambers of the sick, will find that, from ignorance and misapprehension, he will confound one complaint with another, for this obvious reason, that he has come to his task unprepared and uninstructed.”¹

We flatter ourselves that we live in a scientific age and we are scientific men. We smile at the ineptitude which led Harvey's contemporaries to abuse him and scout his discovery, and the Faculté de Médecine de Paris to forbid the introduction of his writings on the circulation of the blood in the medical schools. We pharisaically

¹ Paulus Eginetæ: Sydenham Society Edition, Editor's Preface, pp. xi-xii.

felicitate ourselves that we of the twentieth century are blessed with more receptive minds. "*Tempora mutantur non nos mutamur.*" It is not so long since that Lister had to face a storm of antagonism and abuse, and found himself and his followers involved in long and bitter controversy on the subject of antiseptic surgery, or that the renowned Pasteur was persecuted by the profession, which ultimately profited most by his discoveries.

"Like all really great physicians," says Neuberger,¹ "Hippocrates was far from shutting his eyes to the history of medical art, far from despising, in blind over-estimation of his own powers, the work of his predecessors, because it may have been faulty. In *Ancient Medicine* he writes: 'I do not say that the old art of healing should be abandoned as of no account or as though its investigations were wrongly conducted; on the contrary, I maintain that its way of thinking came so near to truth that one should take it more into consideration and wonder at the discoveries made inspite of so great a lack of knowledge.' These words, which even to-day may be laid to heart, demonstrate, not alone the reverent disposition animating the master, but also the motive of that magnanimous action by which Hippocratism restored the discredited art of ancient days to its rightful position."

"The first deficiency noted by Lord Bacon, in his review of medicine," says Russel,² "is 'the discontinuance of the ancient and serious diligence of Hippocrates, which used to set down a narrative of the special cases of his patients, and how they proceeded, and how they were judged by recovery or death.'³ 'This, in fact,' wisely writes Dr. Adams,

¹ Neuberger: *History of Medicine*, Playfair's Translation, p. 130.

² Russel: *History of Medicine*, p. 55.

³ Of the *Proficiency and Advancement of Learning*. By Francis Lord Verulam. Edited by B. Montague, Esq., 1838, p. 171.

'constitutes the great superiority of the ancient *savants* over the modern, that the former possessed a much greater talent for apprehending general truths than the latter, who confine their attention to particular facts, and too much neglect the observation of general appearances. I trust no one will be offended if I venture to pronounce, regarding the present condition of our professional literature, that (to borrow an illustration from the logic of Kant) it is altogether cyclopic—that is to say, it wants the eye of philosophy; for although we have learned to examine particular objects with greater accuracy than our forefathers did, the sphere of our mental vision, so to speak, is more confined than theirs, and cannot embrace the same enlarged views of general objects.'¹

Listerism has revolutionised the ancient art of healing as regards the method of wound-treatment, but surgeons are often dogmatic as to the exact method of dressing a wound. Treves and Hutchinson remark²: "All surgeons endeavour to secure that the wound shall be quite clean; shall be aseptic; shall not be irritated; shall be kept at rest. One surgeon accomplishes these ends in one way, another in another, and the results are equal. He who considers that his method of dealing with a wound is the most perfect will find that his neighbour, who adopts very different details, obtains an identical measure of success.

"New antiseptic agents appear from time to time upon the scene. They are pursued, are vaunted as perfect, are diligently employed, and then not a few of them fade away, some very gradually, others with the suddenness of the South Sea Bubble."

¹ Adams' Hippoc., p. 232.

² A Manual of Operative Surgery: Treves and Hutchinson; Third edition, p. 53.

"The merely scientific physician," says Dr. Clifford Albutt (a celebrated English authority on Medicine), "is apt to be blind to useful manœuvres which rest rather upon the accidental than the more permanent qualities of things." And he continues—"Prevalent opinions, though not formal truths, contain truths, and this the practical physician does not fail to perceive; nor does he forget that the observations of any person, however profound, being the observations of an individual of brief life and limited faculties, need some tampering by traditional lore—by the embodied opinions of a vast number of observers over a long period of time."

Let us consider the utility of the study of the Hindu system of medicine :

I. *Origin of Medicine* : (i) *Gods*.—The Āyurveda which forms a part of the Vedas is considered to be of superhuman origin and to have existed from eternity.¹ Though an Upaveda, the science is considered to be co-existent with the "First Teacher" who is the primary cause of the whole universe. The Āyurveda declares Brahman to be the source of all knowledge in medicine as in other sciences. Indeed he is said to have composed the original Āyurveda in a lakh *ślokas* or verses. In the earlier epochs of the Vedas only universal deities were, more or less, in relation with medicine and disease : as the Āśvins, Rudra and other gods. But later on there were deities with definitely medical functions or pest-gods.

It is from God physician derives his light,—it is on Him he calls for succour. The origin and cessation of life manifest His power. Without help from God, no

¹ सोऽयमायुर्वेदः शाश्वतो निर्दिश्यतेऽनादित्वात् स्वभावसंज्ञितव्यवस्थान्ना-
वस्थानावर्तित्वत्वात् ।

physician can be successful. Therefore the ancient Hindus regarded medical science to be of divine origin.

Russel says¹ : "The Divine Founder of our Faith appeared not only in the character of a preacher, or prophet, but very conspicuously in that of a Healer, or, in fact, of a *Medical Man*,—we use the expression with all reverence. One of his appellations, that of Saviour, is translated into German, by the word Heiland, or Healer; and to the common eye of the time, his work was the curing of the sick. Most of the deeds recorded of Him in the Gospels, were instances of the restoration of health or life. That this was the impression made upon his contemporaries, appears from the letter, written by King Abargus, of Arabia, and translated out of the Syriac language by Eusebius."²

(ii) *Animals as Instructors of Medicine*.—In certain cases, the lower animals were the preceptors of men in matters of selecting food-stuffs and medicinal drugs.

This view is also found current in other countries. Schmiedeberg thinks that man has imitated the habits of animals in the detection of remedial agents. It is said that the successors of Mercury, the father of medicine in Egypt, learned the process of venesection from the hippopotamus which is said to perform the operation on itself by striking the leg against a pointed reed, taking care to direct the stroke against a vein.

"Heated animals refresh themselves in cold water, warm their stiffened limbs in the sun, and destroy irritating parasites. Cats and dogs lick their wounds; dogs eat grass to excite vomiting. A dog with a broken bone runs on three legs holding the broken one so that it may set

¹ Russel: *History and Heroes of the Art of Medicine*, pp. 71-2.

² The *Ecclesiastical History of Eusebius Pamphilus*, translated from the Greek by the Rev. C. F. Crusé, A. M., p. 32.

without appreciable shortening ; monkeys seek to check the flow of blood by application of the paw, and are adept in the extraction of foreign bodies, such as thorns..... Cases of mutual help are seen particularly in animals living a social life, such as bees and ants, the latter of which care for their wounded..... It is related that the Egyptian Ibis uses the beak for self-administration of enemata ;swallows to heal sore eyes, employ the juice of celandine ; bears to cure stomach disorders, leaves of arum ; tortoises use, as antedote to snake-bite, a variety of organum ; stags cure their wounds with leaves of dictamnus, etc. In India, where the bitter root of ophiorrhiza mungo is esteemed as an antidote to snake-bite, the lesser ichneumon is* designated by the natives as the animal from whom its qualities were learnt." (Neuberger.)

The story of Polydus who cured Glaucus, son of Minus, King of Crete, from snake-bite, by observing how a dead suake was vivified by another, is another example, but unfortunately the narrator has forgotten to inform us of the name of the herb.

Let us consider the medical attainments of animals as described by Pliny : " The hippopotamus has even been our instructor in one of the operations of medicine. When the animal has become too bulky, by continued overfeeding, it goes down to the banks of the river, and examines the reeds which have been newly cut ; as soon as it has found a stump that is very sharp, it presses its body against it, and so wounds one of the veins in the thigh ; and by the flow of blood thus produced, the body, which would otherwise have fallen into a morbid state, is relieved ; after which, it covers up the wound with mud.

" The bird, also, which is called the Ibis, a native of the same country of Egypt, has shewn us some things of a similar nature. By means of its hooked beak, it laves

the body through that part by which it is especially necessary for health, that the residuous food should be discharged. Nor, indeed, are these the only inventions which have been borrowed from animals to prove of use to man. The power of the herb *dittany*, in extracting arrows, was first disclosed to us by stags that had been struck by that weapon; the weapon being discharged on their feeding upon this plant. The same animals, too, when they happen to have been wounded by the *phalangium*, a species of spider, or by any insect of a similar nature, cure themselves by eating crabs. One of the very best remedies for the bite of the serpent, is the plant with which lizards treat their wounds when injured in fighting with each other. The swallow has shown us that the *chelidonia* is very serviceable to the sight, by the fact of its employing it for the cure of its young, when their eyes are affected. The tortoise recruits its powers of effectually resisting serpents by eating the plant which is known as *canile bubula*; and the weasel feeds on *rue*, when it fights with the serpent in pursuit of mice. The Stork cures itself of its diseases, with *wild marjoram*, and the wild boar with *ivy*, as also by eating *crabs*, and, more particularly, those that have been thrown up by the sea.

“The snake, when the membrane which covers its body, has been contracted by the cold of winter, throws it off in the spring, by the aid of the juices of *fennel*, and thus becomes sleek and youthful in appearance. First of all it disengages the head, and then it takes no less than a day and a night in working itself out, and divesting itself of the membrane in which it has been enclosed. The same animal, too, on finding its sight weakened during its winter retreat, anoints and refreshes its eyes by rubbing itself on the plant called *fennel*, or *marathrum*;

but, if any of the scales are slow in coming off, it rubs itself against the thorns of the *juniper*. The dragon relieves the nausea which affects it in spring, with the juices of the *lettuce*. The barbarous nations go to hunt the panther, provided with meat that has been rubbed with *Aconite*, which is a poison. Immediately on eating it, compression of the throat overtakes them, from which circumstance it is, that the plant has received the name of *pardalianches* (*pard-strangler*). The animal, however, has found an antidote against this poison in human excrements; besides which, it is so eager to get at them, that the shepherds purposely suspend them in a vessel, placed so high, that the animal cannot reach them, even by leaping, when it endeavours to get at them; accordingly, it continues to leap, until it has quite exhausted itself, and at least expires: otherwise, it is so tenacious of life that it will continue to fight, long after its intestines have been dragged out of its body.

“When an elephant has happened to devour a chameleon, which is of the same colour with the herbage, it counteracts this poison by means of the *wild olive*. Bears, when they have eaten of the fruit of the *Mandrake*, lick up numbers of Ants. The stag counteracts the effect of poisonous plants by eating the *artichoke*. Wood pigeons, jackdaws, blackbirds, and partridges, purge themselves once a year by eating *bay* leaves; pigeons, turtle-doves, and poultry, with *wall pellitory*, or *helrine*; ducks, geese, and other aquatic birds of a similar nature, with the *bulrush*. The raven, when it has killed a chameleon, a contest in which even the conqueror suffers, counteracts the poison by means of laurel.”¹

¹ Pliny: Quoted in Curious Creatures in Zoology. By Ashton. Art.—Animal Medicine, p. 160,

In the Vedas, the medical knowledge is often said to be derived from the actions of animals. In the Atharva-veda, we find the animals acting as teachers of medicine. The boar, ichneumon, serpents, eagles, falcons and birds, oxen, kine, goats, sheep, and wild animals are mentioned as versed in the qualities of medicinal plants (viii. 7, 23-26). In Av. v. 13. 9, the eared hedgehog is said to have disclosed some medicine. In the prayer to the remedy for takman (fever) we find: "An eagle found thee, a wild boar uprooted thee with his snout."

II. From the study of Sanskrit medical books we get accounts of some obsolete customs, which were unknown to any other countries in ancient times, and which are difficult to comprehend in modern ages.

(i) *Viṣa-Kanyā or the Poison-girls*.—It was the custom in Ancient India to send poison-girls as presents to rival kings, who are said to have met death by their loving caresses and embraces. In the *Suśruta Saṁhitā*,¹ the physician in attendance on kings are cautioned against such poison-girls who are said to have been sent by enemies to murder the reigning princes:—

विषकण्ठयोगपयोगादा चक्षुश्चादमुक्षरः ।

तस्माद्द्वेयं सततं विषाद्रत्यो नराधिपः ॥

We find a reference to it in the *Devi Purāṇa*² where men are cautioned against the embraces of the poison-girls.

न चाविज्ञातशीलासु स्त्रीषु भोग्यागमः कश्चित् ।

विषकण्ठ्यामय' धीरं परपञ्चं युयते परम् ॥

In the *Mudrā Rākṣasa*, we find a similar reference, where a rumour is said to have been circulated by Cāṇakya,

¹ *Suśruta Saṁhitā*, V. I.

² *Devi Purāṇa*, Ch. IX.

to the effect that Rākṣasa had the poor Parvataka killed through a poisonous maid ¹ :

अथ तावद् दृष्यते पर्वतकयोरेव विनाशेनापि चाणक्यस्यापकृतं भवतीति विषकण्ड्या
राक्षसीनाम्ना कर्मव्यलीपकारि मितं पर्वतक इति सञ्चारिती जगति जनापवादः ।

In the Hitopadeśa this story also occurs. It is said that the damsel was so venomous that flies alighting on her body while in perspiration instantly perished.

There is evidence that kings in ancient times tried to discover antidotes by making experiments with poisons upon criminals. Mithradates VI, Eupator (120—63 B.C.), the learned King of Pontus found out a panacea—the famous antidote, Mithradation, for all kinds of poisons. By increasing its use, he is said to have immunised himself against poison. Similarly these poison-girls habituated themselves by increasing their dosage of poison which they began to take from their infancy. They rendered themselves immune to poison but the emanations from their bodies became highly poisonous to others.

In Aristotle's "Secretum Secretorum,"² we find a curious reference to this practice of Indian kings—namely the murder of their rivals by means of maids with a poisonous body, whose contact is said to have proved fatal: "Alexander, do not entrust to women the care of the body, but if need be, only to one whom thou hast tried and found devoted to thee and to thy happiness. For thou art like a trust in their hands. Beware of deadly poison, for kings have been killed by them aforetime. And do not confide unto one man the healing of thy body, for one man can easily be seduced; and when it is possible for thee to have ten physicians, do so; do not

¹ Mudrā Rākṣasa, Ch. I.

² Aristotle's Secretum Secretorum, Book II, para. 35.—Translated by Mr. Gaster in J. R. A. S., p. 727.

follow any prescription, unless they have all come together and are of one accord. And let no medicine be prepared for thee except in the presence of them all, and joined with them one of thy trusted faithful servants, who knows the properties of drugs, their combination and proportions. Remember what happened when the King of India sent the rich gifts and among them that beautiful maiden whom they had fed on poison until she was of the nature of a snake, and had I not perceived it because of my fear, for I feared the clever men of those countries and their craft, and had I not found by proof that she would be killing thee by her embrace and by her perspiration, she surely would have killed thee." Lord Bacon also remarks¹: "And there is an old tradition of a maiden that was fed with napellus; which is counted the strongest poison of all vegetables, which with use did not hurt the maid, but poisoned some that had carnal company with her."

(ii) *Śūka-dōṣa*.—The Āyurvedic system of medicine which consists of eight divisions, has a section on Vājīkaraṇa. It treats of the science of promoting the virile power, and notices many customs which, fortunately for the world, have ceased to exist. It is said that the people had recourse to many obscene practices to fatten and strengthen the organs of copulation. One of these methods, according to Vātsyāyana, was the application of Śūka, an unknown kind of poisonous water animal, to the penis to increase its size and strength. As the result of this immoral practice, the organ became the seat of many pathological malformations and it fell to the lot of the surgeons to treat such cases. They describe no less than eighteen kinds of morbid phenomena, some of which are said to be not amenable to treatment.

The disease Impotency seems to have been known

¹ Natural History, Ch. V, 490, Vol. II, p. 139.

in the Vedic times, for in the Rv. (i. 116. 18 ; 117. 24 ; vi. 62. 7 ; x. 39. 7 ; 65. 12) Vadhrimati (*lit.* having an impotent man as a husband) seems to be the name of a woman who owed the restoration of her husband's virility to the Ásvins, and obtained a son, Hiraṇyahaasta. The word is, however, possibly only descriptive. The hymn Av. iv. 4 is a charm to promote virility. The plant dug up for Varuṇa, shall make him full of lusty strength. It will stiffen the *paśas* as a bow. The strength of the horse, the mule, the goat and the ram shall come to him (Av. iv. 4. 8).

The use of aphrodisiacs to promote virility in man is a special feature of Āyurvedic medicine ; and this practice seems to have been known from time immemorial in India. The plant used is called *kapikacchu* (*macuma pruriens*) the cowitch. Its seeds are described as powerful aphrodisiac. This plant is dug up by Gandharvas for Varuṇa. The plant makes the organ so very full of lusty strength, that when excited, the patient will exhale heat. It infuses lusty force into men. It stiffens the *paśas* as a bowstring upon the bow.

The practice of applications of various substances to give tone to the organs of copulation was in vogue in many countries in ancient times, and still prevails in certain lands, as will be known from the study of the "Pathologica Sexualis."

(iii). *Temple-sleep*.—In ancient times, the temples of gods offered asylums for patients suffering from diseases, as in the present time, in India, when patients suffer from incurable maladies, they often go to some celebrated temples to get their diseases cured by divine aid. These temples offered suitable opportunities of examining patients, of watching the results of methods of cures, of studying the

effects of remedial agents, and of gaining experience by the temple-archives, wherein were written the histories of diseases. Such temples existed in Greece and her colonies : at Cyrene, Crotona, Rhodes, Cos, and Cnidos where the Asclepiads or the temple physicians practised their profession with renown in the earliest times. At Pergamus, a town in Asia Minor, the birth-place of Galen, there was a celebrated temple of Æsculapius. Hippocrates belonged to the temple of Cos, and Dhanvantari taught surgery at Kāśī. It is from this similarity of names of their birth-places, and from striking resemblances of the Ayurveda and the Greek Medicine, Haas propounded the theory that Dhanvantari was an adaptation of Hippocrates, and Kāśī of Cos.

“The apotheosis of Asclepius came later, and many temples were raised to him. We have record of about one hundred ; those best known to us by their surviving relics were in Cos, Pergamum, and Epidaurus. Recent excavations in Cos have brought to light remains of an Asclepian temple with cells, the base of a statue, and the foundations of a well-house. If Tricca was the most ancient of the medical temples, Epidaurus was the largest, and the mother of many such health-resorts in Greek lands. These Asclepieia, whither, as to hospitals or spas, the sick were gathered together, were situated in places of fine air, pure water, and exhilarating scenery. In or near some of them were medicinal springs. There, besides religious rites, other physical and moral influences—such as the drama, games, social amusements, diet and training, and perhaps, a few drugs—were brought to bear upon the sick in mind or body, as they are to-day at Homburg or Aix-des-Bains. At such resorts the effects of “Airs, waters, and places” and of regimen, as well as those of mental exaltation, diversion, or repose, were

keenly observed by the positive Greek mind, and the results of these more natural methods quickly distinguished from those of priestly ritual. Thus medicine found its place as a branch of natural knowledge, a place which, after Galen, the last of the great Greek physicians, it lost again till the coming of Vesalius and Harvey.”¹

“Of the part taken by priests in the cure of disease we know little precisely, but much may be supposed. By pomp, splendour and ancient enchantments the senses were captured, and the springs of nervous energy unsealed; sorceries and impostures, which are apt to find their way into all great rituals, entered more or less into their system. And of such inspirations and suggestions the physicians may have availed themselves, directly or indirectly; it is alleged that mesmerism was a potent means in the hands of the priesthood. That patients were subjected to hypnotic suggestion we know with some fulness. In the age of Hippocrates it is probable that even the most sceptical inquirers harboured some belief in the supernatural origin of dreams; it is certain that dreams took a considerable part in the treatment of the sick, and that their value as means of “suggestion” was recognised down to the time of Galen. “Incubation” or “temple-sleep” was practised in the Greek temples as in the Egyptian, under the hands of the priests. In the fatal illness of Alexander his generals had recourse to it on his behalf. Incubation was by no means peculiar to the temples of Asclepius; it was practised at many other shrines; as of Apollo, Aphrodite, and Hera. The suppliants in crowds—the sexes were not segregated—their imaginations previously exalted by imposing rites, lay for sleep in the sanctuary by night. If, as we hear,

¹ Albutt: *The History of Medicine*, in ‘*A System of Medicine*’ by Albutt and Rolleston, Vol. I, p. 2, 1905.

some were sleepless, the priests took care, no doubt, that they should see visions and hear prophecies nevertheless. Opium, hemlock, and some other sedative drugs were known in ancient times. In the visions the tame snakes kept in the temples played some part, as we infer from the *Plutus* of Aristophanes, from some of the inscriptions at Epidaurus, and from other testimony. Like the Delphic priestess, the priest of Asclepius also may have kept himself informed of the private concerns of the suppliants, at any rate of the more eminent of them; and we ourselves are in no position to denounce this blend of superstition, of the supernatural, and of natural and worldly wisdom, as mere quackery. Indeed, the Apolline religion may be regarded as an Ionian revolt from nature cults, gloomy, obscure, and corybantic, which then, as in other times and places, enslaved the thought and debased the passions of man. We may dwell rather on the therapeutical results obtained indirectly by the preparation for the vigils; this seems to have consisted in baths, fasting, purgation, anointings, and even bleeding: measures which had their vulgar advantages. On a larger scale, and more persistent method, these trainings, dietetics, mineral and sea bathing, and the like, fell in with the work of the physicians, and with the Greek cult of the body."¹

"The histories of the cases were recorded," says Russel,² "in three different styles; some were upon votive tablets, others were formal descriptions by literary visitors, and the third were drawn up by the physicians themselves. Of the inscriptions on votive tablets there are but four specimens extant, found on an island in the Tiber. As they are of the highest historical interest, and as we are

¹ *Ibid.*, pp. 3-4.

² Russel: *History and Heroes of the Art of Medicine*, pp. 48-49.

not aware of there being a version of them in any English work, we shall translate the German one, made by Sprengel, who also at the same place gives the original.

I. 'In these days the oracle spake to a certain blind man of the name of Gajus : he was to go to the altar and to pray, then make a circuit from right to left, lay his five fingers upon the altar, raise his hand and place it upon his eyes. Thus, in the presence of the people, loudly rejoicing, he regained his health. This manifestation of Omnipotence happened under the Emperor Antoninus.

II. 'The oracle spake to the blind soldier, Valerius Aper : he was to come and mix the blood of a white cock with honey, make an eye-salve, and smear his eyes with it for three days. He recovered his sight, and came and returned thanks to the god before all the people.

III. 'Julian appeared to be in a hopeless state after an attack of spitting of blood. The god, by means of the oracle, ordered him to come and take a pine-cone from the altar, and to eat this mixed with honey for three days. He was cured, and came and thanked the god before all the people.

IV. 'The son of Lucius, who lay hopeless with a stitch in his side, was ordered by the god, in a night vision, to come and take ashes from the altar, to mix them with wine, and lay them on the side. He was rescued, and thanked the god before all the people, and the people wished him joy.'

"It will be admitted that, if this be a fair sample of the cures recorded on the tablets, and we have no reason to suppose it is not, it would be about as hopeless to extract trustworthy observations from them as from the columns

¹ Hundermark. *De Incrementis Artis Medicæ per Expositionem Ægrotorum use in Vias Publicas et Templâ.* 4 to Lips, 1749. Quoted by Sprengel.

in the newspaper which publish the success of Professor Holloway; nor shall we find anything in the next class of much greater value."

"The most celebrated literary man of antiquity, who describes the proceedings in the temple of Æsculapius, and celebrates the cures there performed, is the orator Aristides. We find him constantly referred to, and we may estimate his fitness for the task by the following specimens taken from one of his orations. Speaking of Æsculapius, he says, 'There are that say they have been raised from death by him.' 'But also some, both men and women, lay to his account that limbs of the body have been given them by the providence of the god, their natural ones having been destroyed.' 'But to me, on the other hand, not a part of the body, but the whole body, having preserved and compacted it together, he himself has given as a gift, just as Promætheus, according to the legend, is said to have formed man.' 'And how extraordinary are the visions he sends! telling some to drink gypsum, some hemlock, some to strip naked and bathe in cold water; me, too, indeed, has he honoured in this way—curing catarrhs by river and sea-baths, and fits of prostration by long journeys; and when I was unable to breathe, ordering me to read and write.'¹

Neuberger² says: "Amid the many forms assumed by mysticism the dream-oracles were the chief; they were found mostly in places where the gods had made striking manifestation of their power and presence by strange natural phenomena, *e.g.*, near caves emitting noxious gases; on islands subject to earthquake; in the neighbourhood of hot springs. Many of these oracles acquire medical fame through cures divinely revealed in dreams: among such holy places were

¹ Aristides Orat. in Æsculap.

² Neuberger: History of Medicine, pp. 92, 94, 95.

Pluto's shrine at Acharaka in Lydia, where the dreams were sent, not to the patients, but to the priests; the miracle-working grotto of Trophonius at Lebadea in Boeotia, and particularly the ancient dream-oracle of the earth-god Amphiaraos at Oropos, which imposed on inquiring patients total abstinence of three days from wine and of twenty-four hours from food of any description. Near to this latter sanctuary was a well whose waters might be used for purification or sacrifice only by those whom the oracle had cured; in such cases it was customary to cast a gold or silver cup into the holy spring, and to dedicate images of the cured members as votive offerings to the god. These and other sanctuaries, however, were not exclusively reserved for the sick, who also might turn to any of the principal gods, Apollo, Artemis or Athene, their prayer for healing help. It was in post-Homeric times that the cult of a special god of healing arose, one whose sole office was the cure of sickness and the preservation of health.

"This was the cult of Asclepios (*Ἄσκληπιος*, 'Iatros,' *Ὀφείλιος*, *Παῖας*), whose temples formed the chief and latterly the only seats of theurgic medicine, and were held in such estimation that they survived the Olympian fall.

"It is remarkable that the Asclepios cult flourished mostly in places which, through climatic or hygienic advantages, were natural health resorts. Those favoured spots on hill or mountain, in the shelter of forests, by rivers or springs of pure flowing water, were conducive to health. The vivifying air, the well cultivated gardens surrounding the shrine, the magnificent view, all tended to cheer the heart with new hope of cure. Many of these temples owed their fame to mineral or merely hot springs. To the homely altars, erected originally by sacred fountains in the neighbourhood of health-giving mineral springs, were later added magnificent temples, pleasure-grounds for festivals,

gymnasia in which bodily ailments were treated by physical exercises, baths and inunctions, also, as is proved by excavations, living rooms for the patients. Access to the shrine was forbidden to the unclean and the impure, pregnant women and the mortally afflicted were kept away; no dead body could find a resting-place within the holy precincts, the shelter and cure of the sick being undertaken by the keepers of inns and boarding-houses in the neighbourhood. The suppliants for aid had to submit to careful purification, to bathe in sea, river or spring, to fast for a prescribed time, to abjure wine and certain articles of diet, and they were only permitted to enter the temple when they were adequately prepared by cleansing, inunction and fumigation. This lengthy and exhausting preparation, partly dietetic, partly suggestive, was accompanied by a solemn service of prayer and sacrifice, whose symbolism tended highly to excite the imagination.

“These impressions were deepened by the sight of costly votive offerings for effected cures; the tales of awe-inspiring priests who explained the inscriptions of the temple halls and described many previous miracles, excited greatest hope.

“Thus prepared and raised to a high pitch of nervous tension the patient spent one or more nights in the Hieron, at the foot of great Asclepios’ statue, awaiting the healing, god-inspired dream which fancy should weave out of these late solemn experiences. For as in the Amphiarion so in the Asclepion it was in temple sleep that cures were divinely sent (Greek *ἐγχομήσις*, Latin, *incubatio*).

From inscriptions on the temple of Epidauros (with which the burlesque representations of Aristophanes, in his comedy *Plutos*, agree) we may gather that in earliest times the god himself effected the cure: i.e., that the priest, masked as the god, appeared by night (accompanied by priestesses posing as Hygieia, Jaso, etc.) and probably assisted by the putative descendants of Asclepios (Asclepiads), who were doubtless

in league with the priesthood, actually performed cures which the half-sleeping or half-intoxicated patient imagined to be dreams (binding, anointing, taking or effect of medicines).

In later times Asclepios refrained from these manual services and only indicated the cure, either clearly or symbolically, to the dreamer or his accepted proxy.

The Asclepiads, so-called descendants of the god, severed from the priesthood, or at any rate from its mysticism, ceased to take part in this simple trickery, becoming independent physicians, consenting only at the express wish of patients to carry out the inspired prescriptions.

"In the visions which required to be interpreted by skilled priests (*i.e.*, to be brought into line with their medicinal system) Asclepios enjoined mostly rational cures, such as diet, exercise in riding, hunting, or fencing, also psychical means—listening to a song, seeing a play—less often bleeding or purgatives, at times seemingly ridiculous but really suggestive measures. Success was always ascribed to the credit of the god, failure to the fault of the patient.

"The cured patient was bound to reimburse the priests and their god. In Epidaurus Asclepios once himself claimed the fee with the words, 'Thou art healed, now pay the honorarium.'

"In the ancient custom either 'Anathemata' were offered in the form of effigies, gold, silver or marble, of the healed members, or coins stuck with wax on to the thighs of the god's statue, or cast as votive offerings into the sacred spring. In many temples the cures and the means employed were engraved on the pillars or written on votive tablets of wood and stone, and hung up on posts or pillars. In honour of the god festivals were held, Asclepieia by name, consisting of musical competitions."

"There are many things connected with the healing art in which the public mind is better informed than the recognised authorities on medicine. The miracles of healing wrought at the Shrines of Saints, long the objects

of scorn and contempt at the hands of the medical profession are now declared to be well within the domain of scientific fact. The miracles of Lourdes, the faith cures at Bethsham and similar phenomena having been subjected to the strictest investigation by the most competent medical authorities, are proved to be not impostures and delusions, but simple matters of fact. Science having reluctantly accepted the Faith-cure now declares it to be "an ideal method since it often attains its end when all other means have failed."

"Its domain is limited; to produce its effects it must be applied to those cases which demand for their cure no intervention beyond the power which the mind has over the body. That is to say faith will cure paralysis and other disorders of motion and sensation, dependent on idea, but does not avail to restore a lost organ or an amputated limb.

Professor Charcot believes that the faith-cure may cause ulcers and tumours to disappear, if such diseases be of the same nature as the paralysis cured by the same means. In all this there is no miracle." He says:—"The diseases are all of hysterical origin; and being merely dynamic, and not organic, the mind has power to influence and cure them. The mind of the invalid becomes possessed of the overpowering idea that a cure is to be effected and it is so." M. Littré thus expresses his opinion on these forms of cure: "*The mind which is most eminently receptive of suggestion, will be the most likely to be influential in curing the body in which it is enshrined by the powerful force of Auto-suggestion.*"

Civilised men, even in modern times, have faith in the potency of religious relics. The following passage quoted from a famous Journal of medicine¹ speaks for itself. "At

¹ Lancet, Vol. II, p. 518, 1891.

this season of the year is annually witnessed the sight of thousands of pilgrims to a well-known shrine in the province of Quebec, where heretofore many questionable cures have been wrought through St. Anne, assisted by a fragment of a digital phalanx which once formed a part of that good woman's anatomy. This year a further addition of an "entire finger joint" has awakened fresh interest among "the faithful," while a branch establishment has been started at Perio, on the Gulf of St. Lawrence, where are to be found another fragment of bone and portion of her shoulder. To show that this decaying remnant of medievalism has still a foothold in Canada, the following is taken from the *Toronto Mail* of Aug. 4th :—"Quebec, 3rd : Yesterday more than eight thousand pilgrims visited the shrine of St. Anne, and a girl named Cote, of St. Paul de Montmapny, who was carried into the church in a lethargic state, lame and dumb, walked away after communicating, apparently perfectly cured."

"In the *Journal de Chimie et de Pharmacie*, Professor B. Dambergis of Athens gives interesting particulars as to the treatment of patients in the Asklepeia of antiquity, especially at the famous shrine of Epidauros. In some at least of the temples the springs were of medicinal character. Analysis of certain of the waters has shown that they are similar in composition and properties to those which are nowadays found to be beneficial in the treatment of gallstones and of disorders of the digestive tract. The old temples of Asklepios were therefore, to a large extent, places to which patients were sent to drink the healing waters and bathe in them : the results are, therefore, by no means wholly to be ascribed to the influence of suggestion or mysticism."¹

¹ B. M. J., 1905, Vol II., p. 458.

In India, we still find similar temples at Kalighat, Tara-keśvar, Baidyanāth, Benares, and other sacred places, where patients suffering from diseases which have been found to be not amenable to treatment, go in number to get themselves cured. There they bathe and pass through many religious ceremonies, observe fastings, lie for days together prostrate on the ground, and pray for the god's mercy. Generally they get medicines in their hands in their dreams; often they are directed to proceed to some place or to some men to get their medicines. There are authenticated accounts of cures in some cases, though here, as in our medical practice, failures are attributed to the faithlessness, or impurity of patients and are lost sight of, while occasional cures are narrated to patients by the priests in an exaggerated form. Votive offerings made of gold, in the shape of tongue, hands, feet, etc., are often offered to the goddess Kālī, when the patients get any relief from distressing symptoms of diseases.

III. *Therapeutic Measures.*—(i) “The immovable apparatus” of the Greek and Arabian surgeons, as improved by Seutin, Dieffenback, and others, gives us great advantage in dealing with fractures. We find such methods described in the medical books of the Hindus centuries before they were known to the Greeks and Arabians.

The patent rattan cane splints, recently adopted in the European army, owes its origin to the bamboo splints recommended in Sanskrit medical books, and used by the Hindu surgeons in their practice from ancient times. Many of the ideas re-discovered and appearing from time to time as new and original, can be found to date back to the ancient Sanskrit works on the art of healing, and particularly in surgery. “In my own personal experiences amongst primitive races,” says Mr.

Wellcome,¹ "I have sometimes found traces of the origin of what are usually regarded as entirely modern discoveries. Some things have been discovered in remote ages and lost, forgotten, and re-discovered. Some ancient discoveries have continued in use through all the ages. Dr. Reisner, in the course of archæological excavations in Nubia, found some well made bamboo splints, dating, I think, some 2000 or 3000 years B.C. Captain Anderson found similar splints in use in the Southern Sudan some years ago, and I myself have seen them in use in the Upper Blue Nile region. A few days ago in Morocco City, Southern Morocco, I saw exactly similar splints being used, and secured them for this museum. The perpetuity and the re-discovery of ancient devices are exceedingly interesting subjects for investigation."

(ii) *Massage*.—Massage is now one of the recognised therapeutic measures useful alike in medical and surgical practice. "The beneficial results of such manipulations," says Despard,² "were well known to the inhabitants of Eastern countries and ancient documents testify to the fact that massage was practised by them many years before the birth of Christ. We read that at the commencement of the Christian era, as well as antecedent to that time, celebrated Greek and Roman physicians prescribed the treatment for their patients, and that Plato classified the movements as being either active or passive. Massage is known to have been employed on the continent for some centuries, but its practice in England dates only from the beginning of 1800. The present system owes much to Professors Ling, Mezger of Amsterdam, Von Mosengeil, Klien, and others. Professor Ling was a

¹ Speech by Mr. H. S. Wellcome at the opening ceremony of Historical Medical Museum, p. 23.

² Text Book of Massage. By L. L. Despard, London, 1911.

native of Sweden. He lived 1776—1839, and it was he who elaborated the "Swedish Medical Gymnastic" system and introduced it in Stockholm in the year 1813."

Shampooing or Massage is an oriental Institution and is still in vogue in India. This practice "may be assimilated by every one with benefit. By its adoption circulation is quickened and muscles exercised with a minimum of stimulation of the nervous system. The process is grateful and exhilarating. It is usually at least among Europeans—carried out just after the morning exercise, before taking the bath, and before going to sleep; but when during great heat, the lower extremities ache from a sluggishly-conducted circulation, and there is a sense of weariness, it may be had recourse to with benefit at any period of the day or night. The kneading and rubbing is conducted quickly and vigorously by a servant, called a bearer, from below upwards, until almost every part of the body, anteriorly and posteriorly, has been thoroughly subjected to the process. The legs and arms may be shampooed in the sitting posture; but the recumbent and decumbent positions are needed when the entire body has to be overhauled. The ayah, or female servant, performs this service for European ladies."¹

(iii) *Hypnotism*.—The Hindus at a very early period seem to be acquainted with the obscure phenomena, called Mesmerism at the present day, after its exponent F. A. Mesmer who in 1778, convulsed the civilised world by his wonderful cures of diseases by this mysterious agency. The various modes of procedure employed by the western mesmerists to induce the hypnotic state *viz.*, staring fixedly at an object, gazing steadfastly into

¹ The Book of Health. Edited by Malcolm Morris: Art.—Health in India, by Sir J. Fayrer and J. Esart, p. 930.

another's eyes, Luy's revolving mirror, and mesmeric passes,—were known to the Hindus. Various methods are described in the Tantras for throwing a man into a trance by methods similar to mesmeric passes. Prof. Crookes in his Presidential Address at the British Association of Science has admitted that the force manifested in the phenomena of Spiritualism “exists outside our scientific knowledge and is exercised by intelligence differing from the ordinary intelligence common to mortals.”

(iv) *Exercise*.—Breathing exercises are prescribed in the Yoga systems. This method is well worth trying especially in combination with other therapeutic measures. Dr. Reimers testifies the value of this method of treatment in acute nasal catarrh.¹ He has them carried out regularly two or three times a day, near an open window, and testing in each case for about five or ten minutes. With the exercises he combines simple gymnastic drill, and in many cases the joint treatment results in an increased potency of the air passages.²

The following remarks are worthy of notice:—
“If Europeans cannot adapt their mode of life to a tropical climate but must indulge in habits totally incompatible with such a climate, they should at all events endeavour to convert their food into wholesome nutriment, and preserve the robustness of their frames by practising athletic exercises, in the cool of the day, and wrestling in imitation of the Puh'lwans. It is indisputable that these individuals enjoy an immunity from disease, unknown by others. There are none whose constitutions resist the exciting causes of disease so well although blood is abundant and their vascular system vigorous. The few

¹ Med. Klin., No. 5, 1912.

² Clinical Excerpts XVI, No. 5, p. 105.

Europeans who have entered thoroughly into the spirit of these exercises return to their native land with vigorous constitutions capable of really enjoying their native country.

“The writer has long admired and practised the calisthenic exercising of the Asiatics, and attributes a better state of health and stamina, and a capability for active pursuits, far superior to that enjoyed by him in England, to a systematic use of these exercises.

“In the Governor General’s Body Guard there is a very good specimen of a gymnasium amongst the troopers, some of whom are very well developed athletics, among the old and most respectable hands.”

For exercise Mr. Brett thus recommends: “The ‘Moogdurs’ the ‘Dund’h’ and the ‘Lézum,’ are the best kind of exercises for general use in India, though it would be well for a young man to go through the whole system at first under a regular ‘Puh’lwan’ and afterwards continue the Moogdurs, Dund’h and Lézum in moderation, as a high degree of artificial training may be carried too far; excess even in what is good, is to be avoided. Nothing is so conducive to a perfect capillary circulation, to the healthy action of the liver and of all the secretions, the tone of the stomach and the sthenic state of the nervous and muscular system enabling us to bear up against a long and sultry day. Friction and shampooing should not be omitted.”¹

IV. *Indigenous Drugs*.—There is a mine of drugs in this country. These are easily available and do not cost much. If the indigenous drugs are carefully worked out by men of special training, the result would be

¹ A Practical Essay on some of the Principal Surgical Diseases of India, by F. H. Brett, Esq., M.B.C.S.L., Bengal Medical Service. Thacker & Co., Calcutta, 1840.

productive of great good to the human race. There is a great need for a pharmacological laboratory in Calcutta, where many new drugs possessing a variety of properties may be scientifically investigated with a view to test their efficacy on manifold diseases. The Sanskrit medical books are replete with the names of various medicaments. Such curative agents are still being used by the Āyurvedic physicians with success. The properties attributed to them require to be verified by us, before we accept or discard them in our practice. There are illustrations of the oft-repeated cases of wonderful remedies now most highly vaunted, a short time later discarded as useless, only to be resuscitated at some future date as new discoveries. "By a study of the history of therapeutics, by a knowledge of the vicissitudes of fashion in the use of therapeutical agents, a lesson might be learnt teaching caution in the acceptance of new and much vaunted remedies, which might of themselves be of value, but come to be viewed with suspicion by the more cautious and sagacious members of the profession. Dr. Gairdner rightly deprecated the "booming" of new remedies, but naturally, did not propose the rejection of a remedy because it was new."¹ Dr. Snowman² justly remarks : "Amid all that is new, clamouring for trial and all that is old still claiming recognition we may aptly adopt as our line of practice an apposite couplet from Pope :

"Be not the first by whom the new is tried
Not yet the last to lay the old aside."

Systematic investigations of the natural vegetable products of India can hardly fail to lead to the utilization of a

¹ B. M. J., Vol. I, 1891, p. 972.

² Clinical Excerpts, Vol. XVI, p. 113.

considerable number of drugs, whose therapeutics are at present unknown to us. In some instances valuable results may be obtained and the commercial and economical value of such investigations is very great.

India possesses one of the greatest drug-yielding regions in the world. Her inexhaustible forests include those of all climatic zones between sea level and the upward limit of tree growth. Oil-bearing seeds, valuable dyes, fibrous plants, varnish resins, tropical fruits, tea and its associates, take high rank among the best in the world.

Norman Cheevers thus writes on the subject of the *Materia Medica* of India in his famous Commentary on the Diseases of India: "This is a subject upon which the Indian physician ought to acquire considerable practical knowledge; but it is a matter which lies outside the object of this commentary. Native medical men and patients constantly speak to us of various native remedies with which we ought to be, at least, acquainted, and several indigenous drugs, such as opium, castor oil, ginger, alum, kat-kalija, atees, gurjun balsam, gulancha, quuntamool, ohiretta, bael fruit, babul bark, neem leaves for fomentation, mustard oil for liniments, sola for corks, Madras fish oil, telini fly, etc., are frequently used in our own practice. The medical authorities insist upon the free use of indigenous medicines in dispensary practice; but here it is needful to remark that, if we are not careful to disguise the appearance and flavour of bazaar medicines, our dispensary patients are apt to accuse us of giving them common drugs and of reserving our best medicines for the rich!

"It has occurred to most of us, when our supply of European drugs has run short at a remote station, to be compelled to fall back upon bazaar medicines. When I

first went to India, we were allowed very little quinine, and had to use bark-powder in our jail and sepoy hospitals. At Chittagong, my supply of bark having run out, and intermittent fever of moderate severity being extremely prevalent, I used the powder of the seeds of *kat-kalija*, *Cesalpinia Bonducella* (average dose, twelve to fifteen grains), in cold infusion of chiretta, for several weeks with perfect success. It is related of Dr. William Pitt Muston that, having under his charge 1,500 sick in the force employed against the State of Gopud in 1805, and being without the usual supply of medicine, he relied, 'and with complete success,' on the materia medica of the Gwalior Bazaar.¹

"My friend Dr. Waring has brought out three editions of a work which ought to be in the hands of every medical man in India. It is entitled 'Remarks on the Uses of some of the Bazaar Medicines and Common Medical Plants of India,' and is published by Churchill. In this book we are taught, by the highest authority on the materia medica of India, how the drugs commonly procurable in Indian bazaars may, in remote parts of that country, be made sufficient for the treatment of all ordinary diseases if the practitioner be also provided with these *nine* medicines:—Quinine, powdered Ipecacuanha, Calomel, Santonin, Bromide of Potassium, Acetate of Lead, Blistering Fluid, Liquor Ammoniac, and Carbolic Acid.² The means of

¹ The harm which the absence of mercurials prevented the worthy doctor from doing must not be left out of consideration in estimating the good which the use of bazaar medicines doubtless wrought upon his sick.

² The practitioner ought to make his own blistering fluid from the country telini fly, *Mylabris cichorii*; if I had my Indian career over again, I would willingly dispense with calomel and acetate of lead.

studying this very important subject more deeply are afforded in the Pharmacopœia of India also prepared by Dr. Waring under the authority of the Secretary of State for India; in the learned and most carefully prepared work of my friend Odoy Churn Dutt, on the Sanskrit *Materia Medica*; and in that great storehouse of Indian pharmaceutical lore, Sir William O'Shaughnessy Brooke's '*Bengal Dispensatory*.'¹

It seems strange that the study of the indigenous drugs, though so important to a physician in India, finds no place in the curriculum of studies prescribed as Syllabus for the Examinations of our Universities. The introduction of the indigenous products of India into European practice in India has not been realised. 'If they are ever to come into general use in hospitals and dispensaries throughout India, it is to the medical colleges and schools that we must look in the first instance. It is there that a correct knowledge of them should be first instilled; that the student should become familiarized with the articles themselves; that he should be made acquainted with their physical characters and medicinal properties; and it is there, during the period of student life, that he should become practically instructed in their employment in the treatment of disease. On the value of knowledge thus gained, it is impossible to place too high an estimate, familiarizing, as it will, the embryo practitioner with remedies which are at hand in the remotest corners of our Indian empire, rendering him in a great measure independent of costly imported articles, and effecting a considerable annual savings to the State.'²

¹ Chevers: A Commentary on the Diseases of India, p. 25.

² Waring: Pharmacopœia of India, 1868, pp. ix-x.

I have collected from various sources the following :

*Table of Substitutes, useful in the event of any deficiency
in the usual Medicines.*

<i>Pharmacopœial Medicine.</i>	<i>Substitutes :—Country Medicine.</i>
Linseed Poultice	... Nuteeya, or Neem-leaf Poultice.
Linseed Meal Poultice	... Rice Flour Poultice.
Conium Poultice	... Dhatura Poultice.
Mustard Poultice	... Get Kuchoo, or Lal Chitra Poultice.
Yeast Poultice	... Toddy Poultice.
Cerate of Cantharides	... Cerate of Telini Flies.
Decoction of Iceland Moss	... Decoction of Gulancha, Ceylon Moss.
Compound Decoction of Barley	... Decoction of Oryzæ or Ispaghool.
Decoction of Oak-bark	... Decoction of Rohun, Acacia Arabica, Pomegranate Bark.
Plaster of Cantharides	... Plaster of Telini Flies, Plumbago Rosca.
Extract of Bark	... Extract of Barberry Bark.
Extract of Gentian	... Extract of Chiretta, Justicia or Kreat, Gulancha or Palo, Kurroo.
Extract of Liquorice	... Extract of Abri or Goonch.
Extract of Logwood	... Extract Dyospyri or Gab, Japan wood, Nemooka, Sappan wood.
Extract of Jalap	... Extract of Kaladana.
Extract of Poppy	... Extract of Hemp.
Infusion of Cusparia	... Compound Infusion of Sohunjuna.
Infusion of Gentian	... Infusion of Bel, Chiretta, Gulancha, Kreat, Kurroo, Pata, Ununtamool,
Infusion of Ipecacuanha	... Infusion of Banopaha, Crini, Kanoor.
Compound Infusion of Linseed	... Infusion of Pedalium, or Gokeroo.
Infusion of Serpentry	... Infusion of Ajapana.
Compound Gamboge Pill	... Pilula Kaladana.
Ipecacuanha Powder	... Compound Powder of Mudar.
Syrup of Sarsaparilla	... Syrup of Ununtamool or Chobchinee.
Tincture of Catechu	... Tincture of Myrobolan.
Compound Tincture of Bark	... Tincture of Barberry, Toddalia.
Tincture of Colchicum	... Tincture of Hermodactyl or Soorinjan tulak.
Tincture of Cubebs	... Compound Tincture of Gurjun.
Tincture of Gentian	... Compound Tincture of Chiretta.
Tincture of Jalap	... Tincture of Kaladana.
Tincture of Hop	... Tincture of Mishme Teeta, Gulancha.
Tincture of Myrrh	... Tincture of Mugrela.
Tincture of Opium	... Tincture of Hemp, Dhatura.
Ointment of Elemi	... Ointment of Gunda Biraza.
Ointment of Nitrate of Mercury	... Ointment of Chakoor, Chalmoogra, Compound Cinnabar, Daod mur- dun, Sal Ammoniac and Borax.
Calamine Cerate	... Compound Ointment of Myrobolan.
Resin Plaster	... Plaster of Gum Kahrubah.
Fresh Lemon Peel	... Dried Lemon Peel (in preparation of Compound Infusion of Orange Peel, Compound Infusion of Gen- tian, Syrup of Lemon and Tincture of Lemon.)

*Pharmacopœial Medicine.**Substitutes :—Country Medicine.*

Lard	...	Hard Soap, Prepared Suet, Resin, or Yellow Beeswax (in preparation of the plasters).
Bitter Orange Peel	...	Indian Orange Peel.
Olive Oil	...	Arachis Oil or Sesame Oil in preparation of Hard Soap, Liniments, Ointments, and Plasters.
Benzoated Lard	...	Benzoated Suet.
Oil of Theobroma	...	White Beeswax (in preparation of Suppositories). Kokum Butter, for Unguenta.
Mylabris Phalerata (Beetle)	...	Tolini fly and other Species of Mylabris in preparation of Blistering Liquid of Mylabris, Warming Plaster, Mylabris Plaster and Vinegar.
Mucilage of Gum Acacia	...	Mucilage of Indian Gum.
Gum Acacia, Gum Arabic	...	Indian Gum, Gum of Wood-Apple Tree.
Catechu	..	Black Catechu, Gab.
Kino Gum	...	Butea Gum (Palas).
Calumba	..	Gulancha, Mara Manzil (Tamil), Coscinum Fenestratum, Trichosanthes Cordata.
Podophyllum Peltatum	...	Indian Podophyllum.
Horse radish	..	Root of Morniga Pterygosperma, So-hunjma.
Male Fern	...	Pomegranate Root-bark, Kamala.
Officinal Sassafras	...	Nepal Sassafras.
Barbadoes Aloes	..	Indian Aloes.
Socotrine Aloes	...	Barbadoes Aloes.
Siam Gamboge	...	Indian Gamboge.
Spermaceti Ointment	...	Kokum Butter.
Copaiba	..	Balsam Gurjun, Liquid Storax, Sandal Oil.
Pine Resins	..	Dammar.
Sulphate of Quinine	...	Karanjwa Powder.
Quinine	...	Bark of Baobab, Sulphate of Reberia.
Ruta Graveolens	...	Ruta Angustifolia.
Jamaica Quassia	...	Bharangi, Kariyat.
Almond Oil	...	Oil of Java almonds (in Mistura Amygdala), or Country almonds.
Myrrh	...	Gngul.
Burgundy Pitch	...	Black Dammar.
Cinchona	...	Bark of Cedrela Toona (Roxb.) Barberry, Atis, Nim Bark, Alstonia Bark, Rohun Bark.
Extract Colocynth	...	Extract Cassia Leaves, Indrayan.
Galls	...	Myrobolans (in lotions, injections, etc.) Kakra-Singhi.
Common Fennel	...	Panmuhuri.
Ipecacuanha	...	Mudar, Kurchi, Tylophora Asthmatica (in Dysentery) Crinum Juice (Emetic and diaphoretic).
Compound Powder of Jalap	...	Compound Powder of Kaladana.
Datura Stramonium, Belladonna	...	Dhatūra Abba,

*Pharmacopœial Medicine.**Substitutes :—Country Medicine.*

Sarsaparilla, Dulcamara	...	Fresh Hemidiasmus root.
Guttapercha tissue	...	Young plantain leaf.
Officinal Squill	...	Scilla Indica, Crinum root.
Cod-liver Oil	...	Cocoanut Oil, Shark-liver Oil.
Acacia Catechu	...	Betel Nut Catechu.
Proof Spirit	...	Arrack from Palmyra or Cocoanut Palms.
Santonica	...	Palas Seeds, Juice of Papaya, Mango Seeds, Veronica Seeds.
Serpentaria Root	...	Aristolochia Indica Root.
Oil Cajuput	...	Lemon Grass Oil.
Oil of Lavender	...	} Ajwain or Omum.
„ Peppermint	...	
„ Thyme	...	
„ Dill	...	
„ Caraway	...	
„ Coriander	...	
„ Anise	...	
Turkey Opium	...	Patna Opium.
Valerian	...	Valeriana Hardwicki, Nardostachys Jatamansi.
Common Dill	...	Sowa.
Pimento	...	Cloves.
Black Pepper	...	Long Pepper.
Tragacanth	...	Kutira Gum.
Senega	...	Muktajhuri (Acalypha Indica), Bakas.
Aconite	...	Aconite Ferox, Bish.
Ergot	...	Indian Hemp.
Alexandrian Senna	...	Tinnivelly Senna.
Elaterium	...	Croton Oil.
Turkey Rhubarb	...	Himalayan Rhubarb.
Lemon Juice	...	Lime Juice.
Oil of Nutmeg	...	Concrete Oil.
Mezereon Bark	...	Plumbago Bark.
Wine, Brandy, Proof and Rectified Spirit.	...	Mahwa Spirit, Arrack.
Cascarilla Bark	...	Michelia Champaka bark.
Wooden Splints	...	Areca petioles, Bamboo.
Lard	...	Shark-liver Oil.

“ While, of course, of the immense number of plants used as drugs by the natives of India, a large number are known to be perfectly worthless, still it must be admitted that our ignorance of the properties and uses of the indigenous drugs is scarcely pardonable. It seems highly desirable that the whole subject should be gone into with greater care than has yet been done, both with the view of weeding out the worthless from the good and of preparing the way for a number of the better class native drugs

taking the place of some of the more expensive and imported medicines of Europe. It seems remarkable that so large an amount of aconite should be collected in Nepal and exported to Europe in order to be reimported into India before it can find its way to the poor people who crowd around our dispensaries. Illustrations of a similar nature might be multiplied indefinitely; *Atropa Belladonna*, the Deadly Night-shade, for example, is a common weed on the Himálaya from Simla to Kashmir, yet every ounce of the drug used in India is imported from Europe, the Indian plant having apparently been entirely overlooked.”¹

ARTICLES OFFICINAL IN THE PHARMACOPŒIA OF INDIA
NOT CONTAINED IN THE BRITISH PHARMACOPŒIA.²

Aconitum ferox, *Wall.* Root. Vish.
Aconitum heterophyllum, *Wall.* Root. Atis.
Coptis Teeta, *Wall.* Root. Mishmi Tita.
Tinospora cordifolia, *Miers.* Root and stems. Gulanca.
Berberis Asiatica, *D.C.*; *B. aristata*, *D.C.*; and *B. Lycium*,
Royle. Root-bark. Rasot.
 Narcotine.
Sinapis juncea, *Linn.* Seeds. Rai.
Gynocardia odorata, *R. Br.* Seeds. Chaulmugra.
Garcinia pictoria, *Roxb.* Gum-resin. Indian Gamboge Tree.
Garcinia purpurea, *Roxb.* Oil of the seeds. Kokum Butter.
Dipterocarpus lævis, *Ham.* Balsamic exudation. Gurjun.
Hibiscus esculentus, *Linn.* Capsules. Okra.
Citrus Bergamia, *Risso.* Juice of the fruit. The Lime tree.
Toddalia aculeata, *Pers.* Root. Lopez root.
Boswellia floribunda, *Endl.* Gum-resin. Ganda-biraja.

¹ Official Report of the Calcutta International Exhibition, 1883-84, pp. 316-17.

² Pharmacopœin of India, 1868. pp. xv.-xvi.

- Azadirachta Indica*, *Juss.* Bark and leaves. Nim.
Soymda febrifuga, *Juss.* Bark. Rahun.
Mucuna pruriens, *D.C.* Legumes. Cowhage.
Acacia Catechu, *Willd.* Extract of the wood. Khadir.
Cæsalpinia (Guilandina) Bonducella, *Linn.* Seeds. Bonduc.
Butea frondosa, *Roxb.* Inspissated juice. Palas.
Abrus precatorius, *Linn.* Root. Goonch.
Arachis hypogæa, *Linn.* Oil of seeds. Ground nut.
Caram (Ptychotis) Ajowan, *D.C.* Fruit. Jowan.
Hydrocotyle Asiatica, *Linn.* Leaves. Penny-wort.
Diospyros Embryopteris, *Pers.* Fruit. Gab.
Punica granatum, *Linn.* Rind of fruit. Pomegranate.
Alstonia scholaris, *R. Br.* Bark. Chatin.
Calotropis gigantea, *R. Br.*; and *C. procera*, *P. Br.* Root-bark. Mudar.
Tylophora asthmatica, *W. et A.* Leaves. Antamul.
Pharbitis Nil, *Choisy.* Seeds. Kaladana.
Andrographis paniculata, *Nees.* Stalks and roots. Kariyet.
Datura alba, *Linn.* Leaves and seeds. Sādā Dhutura.
Plantago Ispaghula, *Roxb.* Seeds. Isapgul.
Crinum Asiaticum, *Herb.* Bulbs. Kanoor.
Oryza sativa, *Linn.* Seeds. Rice.
Andropogon citratus, *D. C.*; *A. Nardus*, *Linn.*; and *A. pachnodes*, *Trin.* Volatile oil. Gandha bena. Kamá-khér.
Gracilaria lichenoides, *Greville*, and other species. Dried plant. Ceylon Moss.
Mylabris Cichorii, *Fabr.* Dried insect. Telini Fly.
Squalus Carcharias, *Linn.* Oil obtained from the liver of the White Shark.

V. *Identification of Diseases*: A study of Indian Medicine may lead to a better identification and description of such diseases as are unknown or uncommon in Europe.

(i) Let us take the example of Leprosy. We find the various forms of the disease in its different stages, more commonly in India than elsewhere. The disease is fully described in Sanskrit books. So it is important that we should study the Sanskrit medical works with an open mind, ready to accept their experience, their description of the disease and their alleged methods of cure; we should have as our motto:

“Prove all things, and hold fast what is good.”

In the Review of “The Transactions of the Medical and Physical Society of Calcutta, Vol. I.,” the Editor of *Lancet* remarks:¹ “It is probable that the imperfect science of the *Baidis* or *Hakeems* of India cannot furnish much instruction to the practitioners of Europe, but liberal and cultivated minds will welcome the light that may be thrown upon the past and present state of oriental medicine, by the labours of the industrious and the learned, whether their information be derived from authentic sources or actual observation. The history of Mahomedan medicine, comprising the most flourishing periods of the schools of Bagdad and Cordova, has been pretty fully elucidated, but fails with the decline of the power of the Caliphs; a long subsequent period in this branch of inquiry is therefore involved in obscurity, and the medical history of the Hindus in an utter blank. In these respects, therefore, there is ample scope for investigation, which may be prosecuted with every advantage in the country in which the Society is with so much judgment established. To the oriental nations we owe the introduction of many simples into medicine, which were unknown to the Greeks and Romans, such as manna, senna, tamarinds and rhubarb, besides musk, nutmegs, cloves, etc.; and in modern times, the madar,

¹ *Lancet*, Vol. X, p. 133, 1826.

croton oil, etc. Hence it is not improbable, that many valuable remedies may yet be culled from the *Materia Medica* of the East ; but if no accessions of value be derivable from that source, a vast store of knowledge, important equally to physiology and pathology, may be collected and rendered subservient to the healing art. That much may be done, is proved by the present volume of transactions, which, although the Society has been so recently established, contains many papers of sterling value, of these we shall now proceed to give some account. The first is an elaborate dissertation on "*Kushta*, or Leprosy, as known to the Hindus," by H. H. Wilson, Esq. This formidable and loathsome disease, as it occurs in India, is well adapted for medical research, as its nature is uncertain, and its treatment undefined. The talent of Europe has been baffled by the want of experience, which nothing but actual observation can convey. There is an ample field, therefore, for the Indian observer, who has numerous opportunities of examining the disease under all its forms, and in all its stages. Under these circumstances, we trust this Society will remove the reproach to medical science, and indeed it is a reproach, that so little is known of the subject."

"We are indebted," says Brett,¹ "to the Hindoos for almost every efficacious remedy in this disease." He makes selections from numerous compounds mentioned in Sanskrit books. These have been tried by many able European practitioners in India, and their efficacy rests on the most unquestionable authority.

In India, the Chaulmoogra oil has long been used externally by the *Āyurvedic* physicians from ancient times.

¹ F. H. Brett. A Practical Essay on some of the Principal Surgical Diseases of India, 1849.

The fruit and seed have also been used internally in leprosy.

Sandes¹ of Robben Island is satisfied that chaulmoogra oil is superior to any other known remedy or reputed cure of leprosy. The oil is not successful in every case—it certainly cannot be called a specific. But he is satisfied that 40% patients improve under the treatment. The oil should be given for five years or more and in the largest possible doses. Engle Bey has prepared for him 'antileprol,' a purified form of the oil. He found benefit from its use in many patients. The researches of Sir Leonard Rogers prove that Sodium Hydncarpate (Sodium Gynseardate A) is a highly useful remedy in Liprosy.

(ii) *History of Cholera*.—The modern history of Cholera begins from 1817 when it appeared in Jessore and soon ran its pandemic course within two years over the whole world. Since then the disease never entirely disappeared from us—at times it attacks its victims sporadically, at others running as a terrible scourge counting its victims in thousands. But it seems strange that the English physicians considered the disease as a novel one. Had they been learned in medical history they would have known that the disease was known to Celsus in A. D. 262, to Sydenham in 166', and to the Ayurvedic Physicians Caraka and Susruta about 1000 years B.C., who describe it as Visucikā. The Chinese writers (5th century B.C.) mention it as Ho-louan; Hippocrates speaks of it as *χολερα*. The Arabic physicians applied the term Haiza to cholera, and this word is in common use in India at the present day.

Fayrer² says: "There is abundant evidence to show that the disease has been well known and described since

¹ Journal of Tropical Medicine and Hygiene, March 1, 1912.

² Natural History and Epidemeology of Cholera, p. 11.

the very earliest periods of history, nor is there anything in this record to prove that its origin is to be traced to India alone."

Doubts have been expressed as regards the identity of Cholera as we now find it and Visūcikā as described in the ancient Sanskrit writings. In the second Annual Meeting of the Buddhist Text Society, extracts were read from a Buddhist work, where the name Visūcikā occurs. In one case it followed after eating a rotten radish and frequent drinking of foul water on the way; in another, the disease attacked a Brahmin who greedily ate the various dainties that were served at the table. In the discussion that followed, the following supplementary remarks on the disease (*Visūchikā*) referred to above, were made. I quote the remarks here:

"A few passage from the most ancient authorities on Hindu medicine with their literal translation in English, will show that cholera, in the form it now exists, was unknown in ancient India.

To quote from *Charaka Vimansthān—Chapter II.*—

"Physicians have divided the disorders of the stomach into two classes, *Visūchikā* and *Alasaka*, according to the condition of the bowels. In *Visūchikā*, there is an upward and downward flow, i.e., a vomiting and purging. When there is excess of wind in this disease, gastrodynia, suppression of urine, bruising pain all over the body, dryness of the mouth, fainting, forgetfulness, loss of appetite, contraction of tendons, and suppression of stools will take place. When bile becomes predominant, fever, diarrhoea, burning sensation of the body internally, thirst, forgetfulness and delirium will supervene. In the case where phlegm is predominant, fever ushered in by chill (ague) *malaise* and heaviness of limbs will be the marked symptoms."

To quote from—*Sūśruta Uttaratantra—Chapter 56.*—

"On account of indigestion the wind becomes irritated and produces a painful sensation in the body of the patient like that of the pricking of needles. Owing to this physicians call this disease *Visūchikā—Sūchikā*

meaning a needle. Men versed in the Śāstras, learned people, and moderate eaters seldom suffer from *Viśūchikā*. Greedy people, and those who have no control over their desires, get this disease. In *Viśūchikā* the following symptoms appear:—Fainting, diarrhœa, vomiting, thirst, gastrodynia, forgetfulness, cramps, yawning, bruising sensation all over the body, discoloration of the skin, shivering pain in the cardiac region, and weakness of the head. If the teeth, lips, and nails of the patient become yellowish-brown; if there is no sense whatever; if the vomiting is too severe and eyes sunk into their sockets; if the voice is very low-pitched and the joints seem to be loose, then there is no hope for his recovery."

According to *Babhata-Sūtrathān Chapter 8*.—

"People, who have no control over their desires, by stuffing their stomachs with unripe and indigestible food, bring on *Alasaka* and *Viśūchikā* upon themselves. These are due to the pressing and consequent agitation and irritation of the wind, bile, and phlegm in the stomach. In the latter of the two diseases, the wind being irritated, several kinds of pain, like the pricking of needles, are produced, and hence the name of the disease (*Viśūchikā*).

"In *Viśūchikā*, where wind is predominant, there is gastrodynia, shivering, suppression of urine and stools. Where there is pre-excess of bile, there is fever, profuse diarrhœa burning sensation of the body, thirst, fainting, etc., etc. In the case where phlegm is predominant, there will be coryza, heaviness of the limbs, loss of speech, and flowing in of saliva."

"From the above illustrations it will be seen that the symptoms of *Viśūchikā* do not exactly coincide with the symptoms of Cholera. Dr. Macnamara in his treatise on Asiatic Cholera quoted certain passages from *Suśruta* to establish his view about the Indian origin of cholera, but at last he was doubtful if the description corresponded with the symptoms of the cholera of our age. He observed—quoting from *Suśruta*:—"The patient is attacked with vomiting, purging, faintness, thirst, pain in the abdomen, yawning, forgetfulness, burning heat in the stomach, duskiness of the surface of the body, pain in the head and heart." The worst symptoms are "blueness of the gums,

lips, and nails, diminution of the senses, coldness of the body, sunken eyes, suppressed voice, a feeling of complete lassitude ;' but 'if burning of the palms of the hands, and body, accompanied with sharp vomiting" occur, the patient is likely to recover ; and 'should he digest his food all danger is passed,' the patient obtaining immediate relief, the purging stops and he is in comfort. If this description refers to cholera, says Dr. Macnamara, 'the disease must have been in existence for many centuries.'

"Dr. Mahendralal Sircar in the *Calcutta Journal of Medicine*, of June and July 1883, proved by indirect evidence, quoting several ancient Hindu and Tibetan authorities on the subject, that cholera was not of Indian origin.

"I must conclude in the language of Dr. Sircar : 'Was *Visūchikā* the primitive parent of cholera ? Is there evolution in disease as there is in animated nature ? This is a question well worth a most careful and searching investigation ; for if solved in the affirmative, it will open entirely a new field for hygiene and therapeutics.'"

N. B.—*Kavirāj Bijoyratna Kavirañjan*, a distinguished medical authority of Bengal, is of opinion that *Visūchikā* was a form of diarrhœa, which took the place of cholera in ancient India. He has very kindly sent me the following extracts from *Charak* and *Sūruta* medical works, in support of his views on the subject :—Ed

विस्चिका ।

तं विविधनाम-प्रदीपमाचक्षते भिषजो विस्चिकामस्यस्य ।

तत्र विस्चिकामूर्ध्वबाधश्च प्रवृत्तामदीर्घा यथोक्तव्यां विद्यात् ॥

तत्र वातः शुक्लनाडाहमर्दमुद्यमोपशृङ्गा ।

ज्वमाग्निवैषम्यं सिंहाकुशमसंसाधनानि करोति ॥

पित्तं पुण्ड्रं रातिसारान्मूर्ध्वबाधश्चामदधममस्यपानि ।

सो मा तु चर्ह्योचका विपाकश्रोतस्वराजस्यमाक्षौरबाधि ॥

(चरक विज्ञान-खाने २ अध्यायः) ।

सूचीभिरिव गावाधि तुदन् सैन्यतेऽनिलः ।
 यस्याजीर्णेन सा वेदोद्व्यते तु विसृष्टिका ॥
 न तां परिमिताहारा लभन्ते विद्वितात्मनाः ।
 सूदाक्षानजितात्मानो लभन्तेऽश्मलोक्षुपाः ॥
 सूक्ष्मांतिसारी वमसुः पिपासा शूलं भ्रमोद्वेग-जृम्भनक्ष्माः ।
 वैषम्यं कण्ठो हृदये रुजश्च भवन्ति तस्यां शिरसश्च मेदः ॥
 यः श्वाव-दन्तीष्ट-गच्छाल्पसंज्ञो बन्धुर्हितोभ्यन्तर-जात-नेत्रः ।
 चामस्तरः सर्व्वविसृक्तसन्धिर्यायाग्नरोऽसौ पुनरागमाय ॥
 (युष्मत्स्थीतर-तन्त्रे षट्पञ्चाशदध्यायः)

पीयमाना हि वाताद्या युगपत्तेन कोपिताः ।
 आमेनाग्नेन दृष्टेन तदेवाविश्व कूर्वते ॥
 विष्टभ्यन्तोऽलसकं व्यावन्तो विसृष्टिकाम् ।
 अधरोत्तरमार्गाभ्यां सङ्घसैवाजितात्मनः ॥
 विविधैर्वेदमोहैर्देवाद्यादि भ्रष्टः कोपतः ।
 सूचीभिरिव गावाधि विध्यतीति विसृष्टिका ॥
 तत्र शूलज्वमानाश्च कण्ठशोदयोऽनिलात् ।
 पिताज्वरातिसारान्दार्ढ्यदृष्टप्रलयादयः ।
 कफाच्छङ्खं हृग्गुहवावाक्स्तम्भोवनादयः ॥

(बागभट्टस्य सूत्रस्थानं नमोऽध्यायः) ।

Hirsch says : " The oft-quoted passage from the Aynurveda of Suçruta, which is adduced as evidence of the occurrence of cholera in India in the remotest antiquity, and upon which, for example, Wise relies (' Commentary on the Hindu System of Medicine', Calcutta, 1845, p. 330) appears from the translation of Liétard (given by Scoutetten in 'Gaz. hebdom. de Méd.,' 1869, No. 29, p. 452) to furnish a picture of the disease that is, to say the least, an ambiguous one; and this objection is entirely apart from the doubt as to the very great age of the writing, at least in the form in which it now exists, and the reasonable

suspicion that its author or editor had made use of Greek writings as a model." ¹

As regards the age of the writing and the indebtedness of the Hindus to the Greeks in medicine I refer the readers to my work, "The Surgical Instruments of the Hindus" where I have discussed the questions in detail. I will here simply try to prove the identity of the Visūcikā and Cholera.

It will be seen that the cardinal symptoms of cholera or (i) cholera gravis, according to modern authorities correspond to the symptoms of Visūcikā mentioned in Sanskrit works :

Cause: "Excess in eating, न तां परिमिताहारा समन्ते विदिताननाः।
often of badly prepared or मूढासामजितानमो समन्तेऽप्यवलोचुपाः।
decomposing food, follow- (B)
ing periods of religious
fasts, predispose the nation
of India to Cholera."

Stitt.

Prodromal or premonitory चञ्चल (S), विपाक (C).
diarrhoea.

First stage or the stage of विस्त्रिकामूर्च्छाश्च प्रवृत्ताः दोषा वयोक्त-
evacuation: दयां विद्यात्। (C).

Vomiting: first stomach वमन् (B), कर्हि (C).
contents, then rice-water.

Purging: profuse and fre- जलिसार (B).
quent.

Stool: faecal first, then rice- जलिसारप्रसून मल (C).
water stool.

Cramps and stabbing pain: सुषिभिरेव गात्राणि तुदन् (S); चङ्कमहं
especially of calf-muscles (C); उदरे दण; इक्ष्वाक्योः (B);
and those of feet; abdo- खली (C); इक्ष्वाक्योः विरमोदकस्या
minal muscles less so. वेदना (S.D.); जङ्घादीनां मोटनं
खिन्नपरा इति लोके (D).

Thirst: unquenchable. मुखशोथ (C); दण, विपासा (B);
दण (C).

¹ Hirsch: Handbook of Geographical and Historical Pathology, New Sydenham Society's Edition, 1882, Vol. I, p. 432.

Prostration : sudden loss of strength, yawning.	कृच्छ्र (B, M) ; चासस्य (C).
Gastrodynia. ...	यज्ञ (C).
Second stage : The stage of collapse : the algid stage.	तन्द्रा (C) ; संकृच्छ्र (C).
Purging : frequent ; rice-water stool.	अतिसार (B, C).
Vomiting ...	वमण (B).
Thirst : urgent ...	दृष्टा (B, C).
Nausea ..	उत्क्षेप (C, D), उपस्थितं वमनमिव (B).
Cramps ...	खल्लो (C).
Failure of strength, complete lassitude.	विमुक्तसन्धि (B) ; प्रमौलक (S, D).
Animal heat : Superficial temperature reduced.	कम्प (B) ; शीतस्वर (C).
Rectal temp. elevated ; sense of heat. Hyperthermic type fatal.	अन्तर्दोह ¹ (C).
Circulation : ...	दाह (M).
Heart ...	हृदयकण (B).
Pulse : imperceptible ...	शिरासङ्कोचन (C).
Excretions :	
Urine : aneuria ...	मूत्राघात (B) ; चानाह (C).
Bile	
Voice : Vox Cholericæ : husky, whispering.	वाक्स्थ (V) ; वाक्स्थ (V).
Excessive restlessness then apathy.	ग्यानि (B). गात्रगीरव (C) ; अङ्गुष्ठता (V).
Perspiration : profuse ; cold clammy skin.	घर्ष, स्नेह ।

¹ The symptom called "antardāha" अन्तर्दोह literally means *internal burning*. In this stage the general appearance of the patient is bluish and his respiration labored.

अन्तर्दोहः शैत्यं बहिः यस्य सततं मङ्गलमासः ।

अङ्गमिव दग्धकण्ठं, सीऽन्तर्दोहाद्वर्णितः कथितः ॥

Countenance: peculiar expression; cadaveric appearance: cyanosed, drawn, pinched face.	प्रामाण्य (B).
Eyes: sunk ...	अन्तर्प्रतिष्ठ (B).
Complexion: blue ...	निवर्ण (B).
Shrivelling of the skin of extremities: washer-women's hands.	
Doughiness of the skin of the abdomen:	कुक्षिरामरूपे (S ^f); बाष्पान (D).
Dulness of perception ...	अल्पसंज्ञ.
Common sensibility: dull ...	भ्रम (B, C); मूर्च्छा (C).
Appetite: anorexia ...	अग्निवैषम्य (C); अरोचक (C).
Vision } ...	impaired, विसंज्ञता (B).
Hearing }	
Smell	
Taste ...	अरोचक (C).
Motion ...	अस्तव्य (C).
Integrity of consciousness:	
The Intellect:	विसंज्ञता (B); भ्रम (B, C); मत्तता, प्रलाप (C); प्रलय (V)
delusion.	
The Will ...	मद (C).
The Emotion	
Headache ...	शिरःशूल (B); शिरःरोम (S.D); शिरसः भेदः (S).
Sleeplessness ...	अनिद्रा (B).
<i>The third sage or the stage of reaction:</i>	
Cholera typhoid:	
Surface warmer.	
Pulse: distinct.	
Urine: secreted.	
Temperature: febrile. ...	ज्वर (C, V).
Typhoid stage:	

Death :

Pneumonia.

Enterites.

Asthenia.

Uræmic poisoning :

Coma and convulsion.

नीह, तन्द्रा (C).

(ii) Cholera Sicca

...

Alasaka अलसक ।

The patient dies of collapse without showing symptoms of vomiting or diarrhoea.

Kāśyapa says¹ : "The ingested food is neither ejected by vomiting and purging, nor digested, but remains in the intestinal canal.

"There is no, or very little, diarrhoea and vomiting, collapse sets in so rapidly that the patient is quickly overpowered as by an overwhelming dose of some poison, and dies in a few hours without purging or any attempt at reaction. At the *post-mortem* examination, the rice-water material, so characteristic of cholera, though it may have not been voided during life, is found in abundance in the bowels."

Just as a man who does no work is called idle, so the ingested food remains idle, and hence the disease is called Alasaka (Alasa=idle)."

Caraka says : "The poisonous undigested material, not being got rid of by vomiting and purging, suppresses the functions of the body which then resembles a stick. (It is called दण्डकावसक by V). In this stage the Alasaka is incurable. * * * As these symptoms resemble the symptoms of death caused by poisoning, the derangement is called *Āma-Viṣa* or the poison of indigestion."

Manson : Tropical Diseases, 1900-1, pp. 36-45.

नाशयति न चापुनमाहारी न च पश्यते ।

कोष्ठे स्थितोऽलसीभूतस्ततोऽसञ्चलः स्रुतः ॥

Kāśyapa.

Dyspnoea	...	{ महाबाधः । निबद्धो नासतावापि कुक्षानुपरिधावति (S).
Hiccough	...	हिक्का (S).
Belching	...	उद्गार (S).
Tympanites	...	आधान, विट्थ (C).
Cries for pain	...	अत्यर्थं कुञ्जति (S).
Retention of urine and faeces	...	वातवर्जनिरोधः (S).

In Visūcikā (cholera gravis) and Alasaka (cholera sicca) the following symptoms are said to be of bad prognosis :

दन्त, चोष्ठ, नख श्यामवर्णं (B)	...	Blueness of teeth, lips and nails. Cyanosis.
अल्पसंज्ञ	...	Slightly conscious.
अक्षु अन्तर्गदित	...	{ Eyes deeply sunk in the
अश्वत्थारयातनेनः (M)	...	{ orbit.
वमि	...	Vomiting.
मोह	...	Loss of consciousness.
शामस्वर (B)	...	Weak voice.
विमुक्तसन्धि (B)	...	Looseness of joints.
सन्ध (S)	...	Cessation of stools entirely is a symptom of evil omen.

पीडितं नासतेनात्रं श्लेष्मा रक्तमसरा ।
अल्पसं चोमितं दोषे श्लेष्मातेनैव संस्थितः ।
यत्नादीन् कुञ्जते तीव्रास् छर्द्दीतीसारवर्जितान् ॥
कुक्षिरामघ्नतेऽत्यर्थं प्रताप्यत्यर्थं कुञ्जति ।
निबद्धो नासतावापि कुक्षानुपरिधावति ॥
वातवर्जनिरोधश्च कुक्षौ यस्य शङ्क्यते ।
तस्मात्सकमाचटे हिक्कोद्गारौ तु यस्य तु ॥

Suśruta Saṁhitā, VI. 56.

Caraka recommends common salt and hot water to excite vomiting in the treatment of cholera : तत्र साध्यमानं प्रदुष्टमक्षी-
भूतमुद्ग्रेष्येत्, पावयित्वा कषयस्तु चारि ।

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(iii) In the variety called विलम्बिका or दलानसका we find the following symptoms described :

दुष्टम् भूतं कफमादसाभ्यां प्रवर्तते नीरमपच यस्य ।

विलम्बिकां तां श्वदुश्चिकित्सां प्राच्यते शास्त्रविदः पुराणः ॥

Suśruta Samhitā, VI, 56.

श्वदुश्चिकित्साः—प्रत्याख्याचोपचरणीयं । रदनसाध्यचेति ज्ञेयम् : (B)

“When the ingested food is neither ejected by vomiting nor by purging due to deranged Kapha and Vāyu, the disease is called Vilambikā by the ancient physicians learned in science. It is difficult to cure.”

The Vilambikā and Alasaka, the two varieties of Visucikā of the Āyurveda show the same symptoms, i.e., collapse without vomiting and purging, the only difference being that in Alasaka there is intense griping pain but in Vilambikā pain is absent.

The Sanskrit name for Asiatic cholera is *Visucikā* which is derived from *sūci* a needle or pin, implying that in cholera peculiarly painful sensation all through the body like the piercing pain caused by a needle or pin occurs

सूचीमिव गात्राणि तुदन्सन्निवृत्तेऽमिलः ।

यवाजीवेन सा वैदेर्विसूचीति निगद्यते ॥

Thus we find that the disease described as *Visucikā* in the Āyurveda produces all the symptoms of cholera, and there is scarcely any doubt that cholera was known to the Hindus in ancient times. In Sanskrit books diseases are not described in detail,—only the main symptoms are mentioned. Dalvanācārya writes : तद्वद्विस्वादीर्षान् प्रसूयं न मर्तितं तद्गुणैरेव चयत्तानाम् न सञ्चयन्ति अतः प्राप्यं नामिदितं । (vi. 56).

The following abbreviations are used :

C=Caraka. S=Suśruta. B=Bhāva Miśra. S. D.=Śivadāsa. V=Vāgbhaṭa. M=Mādhava Kara. D=Dalvanācārya. C.D=Cakradatta.

(iii) *Small Pox and Vaccination*.—The ancient Greeks and Romans were 'unacquainted with small pox (Friend, Mead, Mason Good, Adams) although William (Inquiry into the Antiquity of Small Pox), Moore (History of the Small Pox), and Baron (Life of Jenner) have tried to prove the contrary. It is generally supposed that small pox was first described by Ahron in the "Pandects" in the fifth; by Procopius in his "De Bello Persico" in the sixth and more in detail by Rhazes in his treatise "De Varioliset Morbillis." in the tenth century A.D. Greenhill's translation of Rhazes's work forms one of the volumes of the Sydenham Society's publications. But the disease was well known to the Hindus and the Chinese about 1100 B.C. There is a Chinese treatise written long before Christ, entitled 'Teonta-hinfa' or 'Heart Words on the Smallpox'. Holwell, in his "Account of the Manner of Inoculating for the Small Pox in the East Indies," 1767, p. 8, refers to the traditions among the Brahmans concerning the prevalence of small pox in India and to the temple-worship of Śītālā, the goddess of small pox from very ancient times.

"According to Holwell, traditions have existed in the Brahmin caste from time immemorial concerning the prevalence of small-pox in India. There has existed in that country from the earliest times the temple worship of a deity whose protection and help were invoked on the epidemic outbreak of the disease. In the Atharva Veda a description of this temple service is contained, together with the prayers used by the Brahmans at the inoculation with small-pox, which has been practised there from the remotest antiquity."¹

Dr. Chapman says that "at a very remote period, in Hindustan, a tribe of Brahmans, resorted to it as a religious

¹ J. W. Moore: XXth Century Practice of Medicine, Vol. XIII, p. 390.

ceremony. A small incision was made and cotton soaked in the virus applied to the wound. Offerings were devoted to the goddess of spots, to invoke her aid; this divinity having hinted at inoculation—the thought being much above the reach of human wisdom and foresight.”

“The temple-worship is very widely spread in India; the goddess to whom it is offered, bears various names in various parts of the country, corresponding mostly as it seems to the character of the disease or to the mode of treatment. According to Moore (*‘Med. Times and Gazette,’* 1869, Nov., p. 634) numerous temples of this kind are met with in Rajputana.”¹

There “the people firmly believe variola to be under the control of the goddess Matha, in whose honor temples abound throughout Marwar and fairs are even held at Joudpoor. Near the latter city is a space of ground filled with trees, called ‘Kagli Ka Bagh’ and containing the ‘Setla Deir’ (or smallpox-goddess’s shrine). In the month of March a *mela* is held here in honor of Matha, and thousands of women and children attend with offerings for the goddess. The declivities of most of the numerous conical hills present either a reddened stone or a temple devoted to Matha with most probably an attendant Brahmin priest. Nearly every village has its goddess of small-pox in the immediate locality. and a large piece of ground is esteemed as holy, and ‘Matha Ka Than.’”²

Small-pox Inoculation in India.—“A paper was read in 1767 before the Royal College of Physicians in London by Mr. J. Z. Holwell, F.R.S.,

¹ Hirsch’s ; *Geographical and Historical Pathology* (Syd. Soc. Ed.) Vol. I, p. 125.

² Sir W. J. Moore : *Marwar the Land of Death.*

entitled 'An Account of the Manner of Inoculating for Small-pox in the East Indies.' This paper is extremely interesting, not only because it states the views of a physician on a practice which still prevails to some extent, though unlawfully, in India, but because the writer, as an early Governor of Bengal, was one of the founders of our great Empire in the East, and had during a residence of thirty years in the tropics actively practised his profession for eighteen of them.

"I will commence by giving a brief summary of the paper. Mr. Holwell observes that the 'the salutary method (of inoculation of small-pox) now so happily pursued in England (howsoever it has been seemingly blundered upon) has the sanction of the remotest antiquity. For five and sometimes six years together it passes in a manner unnoticed from the few that are attacked with it, for the complexion of it in these years is generally so benign as to cause very little alarm; and notwithstanding the multitudes that are every year inoculated with it in the usual season, it adds no malignity to the disease taken in the natural way, nor spreads the infection as commonly imagined in Europe. Every seventh year, with scarcely any exception, the Small-Pox rages epidemically in these provinces, during the months of March, April, and May; and sometimes until the annual returning rains, about the middle of June, put a stop to its fury. On these occasions the disease was of the most malignant confluent kind, from which few escaped that took the distemper in the natural way, and they commonly died on the first, second, or third day of the eruption, and the Europeans usually fled from the settlements before the return of the small-pox season. There was hardly ever an instance of a native of the island of St. Helena, man or woman, who if attacked when in Bengal with the disease in a natural way, escaped with

life.' This he attributed to some fundamental error of their diet.

"There was reason to believe from the institution of offerings to the goddess of small-pox that the disease had existed from very remote times in India, and had, indeed, spread from it to the West. Inoculation was performed by Brahmins from Brindaban, Allahabad, Benares, etc., over the country. They arrived in Bengal early in February or March before the usual return of the disease. The people prepared the patients for the operation by a restricted diet, and the Brahmins would not operate unless this had been done. The inoculators passed from house to house and operated at the doors asking how many pocks the parents wished, and preferred to operate, for males between the wrist and the elbow, and for females between the elbow and the shoulder. Fifteen or sixteen minute scarifications were made with an iron or steel instrument, and a rag charged with variolous matter from inoculated pustules of the previous year was allowed to remain on for about six hours. The wound was also moistened with Ganges water and the part was, in the first place, dry-rubbed for about seven or eight minutes. All the time the goddess was being invoked. Cold water was poured over the patient up to the time the fever appeared, and again after the eruption came out until the scabs of the pustules dropped off; and restricted diet was ordered for a month. The pustules were opened with a sharp-pointed thorn. The patient was exposed freely to the air outside the house, and the eruptive fever was generally so slight as not to need much restriction. The operation rarely failed, nor did any one often miscarry under it, and the number of pustules was rarely less than fifty or more than two hundred.

"Although very early prejudiced against the cool regimen and the free admission of air, Holwell soon came to the

conclusion that any one who did not adopt that treatment would lose many patients. He suggests reasons for agreeing with the Brahmans that it was wise to disallow the use of milk during the progress of the affection and he then refers to their ideas as to the causation of the disease, which were as follows. The immediate cause of the small-pox was believed to exist in the mortal part of every human and animal form. In a footnote he states that at the time of the confluent small-pox epidemics turkeys and other poultry were carried off by the disease in great numbers, and even his own parrot was found on dissection to have as many pustules in his digestive tract as on his body. The mediate cause which stirred up the first and threw it into a state of fermentation was, it was considered, the presence of innumerable imperceptible animalcules floating in the atmosphere. These, they said, cause all epidemical diseases, and imprison most malignant spirits. These particles pass in and out of the respiratory tract without doing any harm, but cling to the food and especially to milk and the other articles which the Brahmans prohibit when the diet is restricted. Holwell himself saw no reason why such pestilent animalculæ, driven by certain winds, or generated on the spot by water and air in a state of stagnation and received into the body with food, should not be the cause of the spread of malignant epidemics at particular seasons, and that epidemical blights, which may be observed to go often hand in hand with epidemical diseases, may be due to similar causes. The friction and the dilution with water seemed to promote absorption and, as Ganges water was used, confidence was given to the patient and he was impressed with the solemnity and piety of the whole transaction.

“ Holwell particularly testifies to the value of the affusion of cold water from a height up to the time of the

appearance of the fever, and again when the eruption comes out, and further says he was an eye-witness of its power and utility when the pustules had sunk. He agrees with the Brahmans in attaching great importance to opening the pustules with a thorn, as this mitigates or prevents the second fever. The opening with a thorn has also the advantage of the orifice being so small that there is no admission of air into the part. In conclusion, in laying again great stress on the cool regimen and on the free admission of air he trusted they might be introduced into regular and universal practice.”¹

*The Antiquity of Vaccination in India.*²—“Under this heading a leading article appeared in the British Medical Journal of April 15th, in which reference was made to a claim advanced by Lord Ampthill on behalf of the Hindus of having practised vaccination many centuries before it was, to use his own word, ‘rediscovered’ by Edward Jenner. Lord Ampthill based this claim on a passage in an ancient Sanscrit work by Dhanwantari which he said had been discovered by Colonel King and brought to his notice by that distinguished officer two years before. The speech in which the passage occurred was made by Lord Ampthill on the occasion of the formal opening of the King Institute of Preventive Medicine at Guindy on March 11th, a report of which was published in the *Madras Weekly Mail* of March 16th.

“In commenting on that speech we ventured to hint that Lord Ampthill had somewhat misunderstood the information supplied to him, as the existence in Sanskrit

¹ B. M. J., 1905., June 17, p. 1336.

² B. M. J., 1905, July 12, p. 136.

works supposed to be ancient of passages in which vaccination was described had been known for something like a century. In proof of this statement we referred to Baron's *Life of Jenner* in which mention is made of passages purporting to be extracts from a medical work attributed to Dhanwantari which were published in the *Madras Courier* of January 12th, 1819. In these passages an account was given of the inoculation of matter from the cow as a protective against small-pox. It was added that Baron had made inquiries as to the genuineness of those passages of eminent Oriental scholars, who considered that there were good grounds for suspecting that they were interpolations made with the object of inducing the Hindu to submit to vaccination by making him believe that it was a traditional practice among his people. In reference to the article, the main points of which are here recapitulated, we have received the following letter, dated May 10th, from Lieutenant-Colonel W. G. King, I.M.S., C.I.E., Sanitary Commissioner for Madras :

‘In your issue of the 15th April, you refer to the above subject, as discussed by His Excellency Lord Ampthill in his address at the opening of the King Institute, Madras. During his tenure of office he has, as is well known, taken every opportunity of encouraging the advance of preventive medicine, and has also exhibited interest in the historical bearing of the subject in this country, in connexion with ancient Hindu writings. In response to a query on the latter aspect two years back, I furnished him with the paper to which he referred. As Lord Ampthill's statements, in this particular, were made on the authority of this document, it rests solely with me to deal with the matter.

‘The paper in question was published in the *Madras Mail* in 1899, in response to a request for information to

me personally in its columns by the late Surgeon-General Sir Charles Gordon. It opened by referring to the oft-quoted passage from the *Madras Courier* of 1819, and stated distinctly that it had 'at intervals been circulated to the lay and medical press.' I then proceeded to say that for many years I had attempted, with the aid of Sanscrit scholars, verification of its origin from Dhanwan-tari, and, after alluding to the difficulty attending such researches, explained that 'the nearest approach' to settling the question was obtained when hunting for Sanscrit references for plague, by the quotation being found in a Sanscrit work entitled *Ayurveda Vijnana*. This is a modern compilation of extracts from various authors. As a fact, it was I who, though no Sanscrit scholar, was able to arrest attention to the passage whilst the book was being read aloud to me, as I had heard it so often quoted; and it was to this little incident Lord Ampthill had the kindness to allude. Since that period it has also been found for me in the *Sabdakalpadruma*, which is also a modern compilation, written by Rajah Sir Radakant Deb Bahadur. This author was held in the highest respect by the best Sanscrit scholars including Max Müller—a fact which should weigh in favour of the genuine character of the quotation. The work was completed, according to the author, in the thirtieth year of his age, or six years before the appearance of the *Courier* quotation. It is necessary to allude to these facts, as you have in your article erroneously assumed that I had made a claim to precedence in respect to the *Madras Courier* of 1819, in first drawing attention to the subject.

'Your main object is, however, to throw doubt upon the validity of the quotation. Unfortunately, I am not in a position to consult Baron's work, quoted as your authority; and I am placed in some difficulty by your not positively

affirming that the false 'poem' actually contained the particular verse ascribed to Dhanwantari. I shall be very much surprised if this can really be done by you. But, even if this subject be treated in the general manner you have done, I think it reasonable to believe that Baron must have misunderstood Sir John Malcolm; he must have muddled the whole subject. Far from Ellis being the criminal, he was eminently an interpolation detective. In the fourteenth volume of the *Transactions of the Asiatic Society*, there will be found exposed by Ellis, in an essay that exhibited the depth of his learning as a Sanscrit scholar as well as his careful and impartial spirit, a gross fraud by Jesuits who had, for the purpose of advancing their religion, resorted to this means. The book which he thus criticized was entitled *L'Ezour Vedam*, and was published in Paris in 1778. If this date be taken into consideration, it is clear vaccination need not have been referred to, seeing that Jenner's scientific confirmation of empirically observed facts was not made till 1798, and vaccination was not introduced into Madras by Lord Clive (Earl Powis) until 1802. Failing, therefore, your being able to prove the quotation actually formed part of the poem you ascribe to Ellis, and you are able to state where the rest of the document is to be found, there is no reason to regard him as guilty of the grave charge made against him, or that we have adduced anything to disprove the ancient character of the quotation, rightly or wrongly attributed to Dhanwantari. I, of course, do not join issue with you as to your second instance of an interpolation, as this was not propounded by me.

'As the Vaccination Department of this Presidency is a branch of my office, I have every opportunity of consulting its records, and I may state that although it is evident many thousands of pamphlets encouraging vaccination

were issued in former years, I can find no attempt to impress the people with the so-called 'poem' of Ellis and, in my opinion, such a base act would no more have secured official approval in India in the past than in the present; nor, in the Sanscrit libraries available in this Presidency, is there any trace of such a record.'

Later we received from Colonel King a further communication, dated May 25th, to the following effect :

'With reference to my letter to you dated May 10th, it is right that I should inform you that, after its despatch, I ascertained that I could not justly claim that Rajah Sir Radhakant Deb Bahadur personally admitted the disputed quotation into his *Sapthakalpadruma*, as the revised edition of this work in which it is to be found was published after his death, long subsequent to the first appearance in the *Madras Courier*. This in no way invalidates my other arguments or, indeed, greatly even in this particular, as the compilers of the revised edition are also recognized Sanscrit authorities.'

"If Colonel King will refer to our article of April 15th he will see that it was there expressly stated that we had had no opportunity of consulting his writings, and that what he calls our erroneous assumption that he had made a claim to precedence in respect to the *Madras Courier* of 1819 was founded solely on the statement attributed to Lord Amphill that Colonel King had discovered the passage in question and had brought it to his notice. In regard to this we said that we could not help thinking that Lord Amphill had misunderstood the information supplied to him. From Colonel King's letter it is clear that this is just what happened. On this point there is, therefore, nothing in dispute between us.

"On the general question of the interpolations our article was really in the nature of an inquiry addressed to

the learned. We confessed our incompetence on questions of Sanscrit scholarship, and we gave Baron's statements for what they were worth in the hope of eliciting some authoritative utterance on a matter of considerable literary and historical interest. It is necessary to lay some stress on this, inasmuch as Colonel King seems determined to force us into a position of antagonism to him in regard to questions on which we have expressed no opinion, for the good and sufficient reason that we hold none. His quarrel is with Baron, and bearing in mind that

'Tis dangerous when the baser nature comes
Betwixt the pass and fell incensed points
Of mighty opposites ;

we decline to be drawn into the fray. That those of our readers as may be interested in the point at issue may have a full statement of the case before them, we give the whole passage as it stands in Baron's *Life of Edward Jenner* (London 1838, vol. i, p. 555, *et seq.*). After referring to a claim of priority in the discovery of vaccination made on behalf of a Frenchman by Husson in the *Dictionnaire des Sciences Médicales* (1821), Baron proceeds :

'The same work which sets forth the claims of M. Rabaut recounts likewise the pretensions of the Hindoos to the knowledge of vaccine inoculation. An ancient Sanscrit work has been appealed to as an authority on this subject.

The subject was mentioned many years ago in the *Bibliothèque Britannique*. It has more recently, been revived in the *Dictionnaire Médicale*, and in the *Madras Courier* of the 12th of January, 1819. The writer of the last-named article refers to *Sancteya Grantham*, a medical work attributed to Dhanwantari, which is said to be 'undoubtedly an ancient composition.'

From this work extracts are given. The first extract describes the method of performing the inoculation with fluid taken from a pock on the udder of a cow, or from the arm of a human subject, etc. The next more particularly describes the small-pox produced by the fluid from the udder of a cow, and appears, in short, to be an imperfect abstract of the opinions and descriptions of Dr. Jenner. It does not at all discriminate between the different sorts of pustules to which cows are liable; it is destitute of all the characters of fidelity and accuracy which give value to information of a scientific nature, and must, therefore, have been quite insufficient to have guided anyone in the management of the very practice it professes to teach. This practice, if it did exist at all in India, must have been extremely rare, but the description given of it is not like that which would occur to any inquirer who had himself investigated the very singular properties of cow-pox inoculation. On the contrary, it wears the appearance of a delineation which had been made, not from original observation, but from materials obviously acquired from other sources and put together with studied ambiguity, the writer having been more anxious to maintain the semblance of antiquity than to convey precise knowledge on the subject of vaccination, had it ever been obtained by the Brahmins, could have been overlooked, and allowed to remain in obscurity till it was called into notice by the industry of British residents in India. To no people on the earth was the secret of vaccine inoculation of greater moment than to the inhabitants of the East, and it exceeds all powers of belief to suppose that such a secret could have been possessed by the most respected caste, without being diffused universally, and the practice adopted with corresponding avidity. The suspicions excited by the internal evidence are not a little strengthened by some circumstances

which I am about to mention. I made it my business to inquire from eminent oriental scholars whether such a Sanscrit work existed, and whether from their experience of the habits and customs of the Hindoos there was reason to believe that they possessed any knowledge of vaccine inoculation.

For valuable information on these points I have to express a deep feeling of gratitude and obligation to Sir John Malcolm, G.C.B., a gentleman not less distinguished by his genius and skill as a commander than by the wisdom, learning, energy, and benevolence evinced in all his civil relations. Through his kindness I am enabled to state the following facts:

On the introduction of vaccine inoculation into India it was found that the practice was much opposed by the natives. In order to overcome their prejudices the late Mr. Ellis, of Madras, who was well versed in Sanscrit literature, actually composed a short poem in that language on the subject of vaccination. This poem was inscribed on old paper, and said to have been found, that the impression of its antiquity might assist the effect intended to be produced on the minds of the Brahmins while tracing the preventive to their sacred cow.

The late Dr. Anderson, of Madras, adopted the very same expedient in order to deceive the Hindoos into a belief that vaccination was an ancient practice of their own. It is scarcely necessary to observe that had any authentic record of such a practice existed, these gentlemen never would have resorted to such a contrivance to gain their object. It is further to be observed that smallpox inoculation was frequently practised by the Hindoos, but there is no proof whatever that they employed vaccination.

Shortly after the introduction of vaccination into Bengal, similar attempts were made to prove that the

practice was previously known there also. As the account of this transaction is somewhat different from that which occurred at Madras, it is proper to mention it. A native physician of Bareilly put into the hands of Mr. Gillman, who was surgeon at that station, some leaves purporting to contain an extract of a Sanscrit work on medicine.

This work is said to be entitled *Sud'ha Sangreha*, written by a physician named Mahadeva, under the patronage of Raja Rajasin'ha. It contained a chapter on Masurica or chickenpocks.

Towards the close, the author appears to have introduced other topics; and immediately after directing leeches to be applied to relieve bad sores he proceeds thus: 'Taking the matter of pustules, which are naturally produced on the teats of cows, carefully preserve it, and before the breaking out of small-pox make with a fine instrument a small puncture (like that made by a gnat) in a child's limb, and introduce into the blood as much of that matter as is measured by a quarter of a ratti. Thus the wise physician renders the child secure from the eruption of the small-pox.'

This communication was shown to Mr. Colebrooke and Mr. Blaquiére, both eminent Sanscrit scholars, and they both suspected that it was an interpolation. The first-named gentleman further adds that the original work, from which the extract purports to have been taken, was not exhibited to anyone well versed in Sanscrit. I believe I may further add that Mr. Colebrooke made inquiries whilst in India, which fully satisfied him that no original work of the kind ever had existence. Sir John Malcolm has also been kind enough to ascertain that no such book is to be found in the library of the East Indian Company.

From these statements it must be apparent that the well-meant devices of those who attempted to propagate

vaccination in India, have led to the belief that the practice was known to the Hindoos in earlier times.'

"From a letter which appears in the *Madras Mail* of May 30th we gather that since the date of his last letter to us Colonel King has had an opportunity of referring to Baron's book at first hand. He adheres to his opinion that Jenner's biographer made "a complete muddle of the information received by him from Malcolm." We must frankly say that, if he did, Colonel King does not seem to us to have cleared up the muddle. Here, as far as we are concerned, the matter must rest."

We have furnished the readers with these long quotations in the hope that they may be interested in the important question as regards the origin of vaccination. There could not be any doubt as to the practice of inoculation by the Brahmans long before the advent of the English in India, Holwell's testimony supports it. But whether vaccination was ever practised in India before the discovery of Jenner was a question which could not be answered offhand. The only proof extant was the couplets in Sanskrit quoted in the *Madras Courier* in 1819, and subsequently in the *Savdakalpadruma*. The couplets are said to have been quoted from *Śākṭeya Grantha* of *Dhanvantari*. I could not trace any such work in the libraries of India, nor has the work been found in the library of the East Indian Company. No reference to it was found in the Sanskrit literature. Below I quote these couplets with translations.

It seems strange that no reference as to the practice of vaccination in India can be traced in the works of Caraka, Suśruta, Vāgbhaṭa, Mādhava, Vṛnda Mādhava, Cakradatta, Bhāva-Miśra and others. But no conclusion can be drawn from this negative evidence. Neither do we find any reference to the practice of inoculation in

the works of the authors cited above. In Av., V. 22, we find a reference to the eruptive fevers: fever with spots on the surface of the body. The spotted or speckled fever—"covered with spots, like reddish sediments" undoubtedly refers to some eruptive fever, as the fever accompanying measles or small-pox. But I have not been able to trace any reference to the temple worship of the goddess of Small-Pox, "with the prayers used by the Brāhmins at the inoculation with Small-Pox," as described by Holwell. But there is no doubt that inoculation was frequently practised in India.

In the hymns to the goddess Śitalā which I have quoted below from the Kāśikhaṇḍa of the Skanda Purāṇa, it is distinctly stated that there is no medicine for this dire disease except prayers to this goddess. She is represented as having four hands, holding a broom-stick in one hand, a water-pitcher in another, a lotus in the third and the fourth hand is shown in the attitude of Abhayā mūdṛā,—the sign of fearlessness and hope. She rides on an ass, and has a winnowing fan as her head-dress. She is represented as naked. She resides in water. Śitalā really means goddess of coldness or water. Her attributes refer to the hygienic measures to be adopted when Small-Pox rages in an epidemic form. Though described as a goddess whose idol is worshipped by the mass, the patient is advised to contemplate her as thin like one of the fibres of petiole of lily, situated between his heart and navel.

The broom, fan and the water-pitcher are the appliances necessary to keep the room in which the patient is isolated, clean and free from flies. Her nakedness is meant to represent the fact that the disease is often carried to healthy individuals through the clothes of nurses, who should be as scantily dressed as possible.

The Śitalā is the Pauranic adaptation of the Vedic Apo Devī who is also described as the mother. The

word *Ap* in Sanskrit is used in feminine gender, hence both *Āpo Devi* and *Śītalā Devi* are described as female deities. The Brahmins still recite in their daily-prayers the beneficial qualities of water, invoked as mother by the *Sindhudvīpa R̥ṣi* in the *Gāyatrī* metre :

“आपोहिहा नद्योभुवः सानकूर्जदधातनः नदिरवाय चचसे ।

योवः शिवतमोरुसः तस्यभाजयते हनः । ऊग्रतीरिव मातरः ।

तस्यावरं गमानं नो यस्य चयाय जिव्रय आपोजनयवाचुनः ॥”

Water was regarded by the Vedic Indians as the source of medicine, and was used by them as a therapeutic agent of great value. It was also a means of purification.

“Water is the elixir of immortality (S.P. Br., 4, 3, 15); water being a means of soothing—they soothe by means of soothing water (*ibid*, 13). “Water is a means of purification, hence he purifies himself with water” (S.P. Br., I. 7, 4, 17). “Within the waters is ambrosia, in the waters is medicine” (S.P. Br., 1, 4, 6; * *Vāj. Saṁ.*, ix, 6).

In *Rv.* (x, 9, 5, 6 and 7; 137, 6) the water is described as the source of medicine; and in *Av.*, II, 3, there is a charm against excessive discharges from the body, undertaken with spring water (see author's work “Medicine in the *Atharva Veda*”). In *Yv.* (*Vāj. Saṁ.*, ix, 6, 1) water is also described as the source of medicine, and in xi, 38, water-goddesses are prayed for a cure. In *Rv.*, x, 9, 1, disinfecting properties are attributed to water.

Water as a medicine is mentioned in *Rv.* (i, 23, 19, 20; 34, 6), *Tai. Saṁ.* (vi. 4, 9, 2) and *Kausītaki Br.*, (xvi, 7).

The application of cold water in hyperæmia was well known. The spring water which runs down upon the mountain was used as a healing remedy; it was recommended as useful in checking discharges and

removing pain. It is also styled as the great healer of wounds. The water is said to contain a hundred remedies. Flowing water is prayed to grant a cure for heart-ache, ocular pain, and pain in the feet. The waters are called the most skilled of physicians (Av., vi, 24). "Waters are verily healers, the waters are scatterers of disease, and the waters cure all diseases" (Av., iii, 7).

But there is neither any mention of the practice of inoculation nor of vaccination in the hymn to Śītālā. So it is difficult to decide whether inoculation, not to speak of vaccination, was practised in the Vedic or Pauranic ages.

शीतलाष्टक-सौत्रम् ।

अस्य श्रीशीतलासोवस्य महादेव ऋषिः अष्टपृष्ठं छन्दः, श्रीशीतला देवता
लक्ष्मीबीजं, भवाशी शक्तिः, सर्वविस्फोटकनिवृत्तये जपे विनियोगः ॥

ईश्वर उवाच ।

नमामि शीतलां देवीं रासभक्षां दिगम्बरीम् ।

मार्जनीकलसोपेतां सूर्पाक्षकृतमस्तकाम् ॥ १

वन्देऽहं शीतलां देवीं सर्वरोगभयापह्वाम् ।

यामासाद्य निवर्त्तते विस्फोटकभयं महत् ॥ २

शीतले शीतले चेति यो ब्रूयाद्वाङ्मोहितः ।

विस्फोटकभयं चोरं चिप्रं तस्य प्रशस्यति ॥ ३

यस्मान्मुदकमध्यं तु घृत्वा सम्पूजयेत्तरः ।

विस्फोटकभयं चोरं गृहे तस्य न जायते ॥ ४

शीतले ज्वरदग्धस्य पूतिगन्धयुतस्य च ।

प्रमदचक्षुषः पुंसस्त्वामाहुर्जीवनीवधम् ॥ ५

शीतले तनुगान् रोगान् दृष्ट्वा हरसि दुस्तरान् ।

विस्फोटकविभीर्षाणां त्वमीकास्तवर्षिणी ॥ ६

नखनखपक्वा रोगा ये चान्ये दाहका दृष्टान् ।

तदनुष्णानमानेभ्य शीतले यासि ते चयम् ॥ ७

न लम्बो ग्रीवश्च तस्य प्रापरीजस्य विद्यते ।
 तामिका शीतले प्राची नाम्नां यस्मानि दिवताम् ॥ ८
 स्यात्तत्तत्तुसङ्घर्षो गानिहन्मध्यसंस्थितान् ।
 यस्यां विचिन्त्येहैवि तस्य सत्युर्न जायते ॥ ९
 अष्टकं शीतलादेव्या यो नरः प्रपठेत् सदा ।
 विस्कोटकमयं घोरं गृहे तस्य न जायते ॥ १०
 शीतलं पठितव्यं यद्वाभक्तिसमन्विते ।
 उपसर्गविनाशाय परं स्वस्वमेवं मङ्गत् ॥ ११
 शीतले त्वं जगन्माता शीतले त्वं जगत्पिता ।
 शीतले त्वं जगन्नामी शीतलाये नमो नमः ॥ १२
 रासभो गङ्गभयेव खरो वैशाखनन्दनः ।
 शीतलावाहनश्चैव दूर्वाकन्दमिहाननः ॥ १३
 एतानि खरनामानि शीतलाये तु यः पठेत् ।
 तस्य गृहे शिग्रमाद्य शीतलाङ्क न जायते ॥ १४

Kāsikhaṇḍa,

The following descriptions in Sanskrit refer to the practice of inoculation and vaccination:

“धनुस्तन्व मसूरी वा नराणाञ्च मसूरिका ।
 शस्त्रेणोत्कृत्य तत्पूयं बाहुमूले विचारयेत् ।
 तत्पूयं रक्तमिलितं स्फोटज्वरकरं भवेत् ॥”
 (धन्वन्तरौकृत शास्त्रेय ग्रन्थः १)

“The matter of the pustules on the teats of cows or on (arms of) men should be taken by means of a knife and introduced into the arms (of child); the pus as it mixes with the blood causes the fever of small-pox.”

“धनुस्तन्व मसूरी वा नराणाञ्च मसूरिका ।
 तज्जलं बाहुमूलाञ्च यद्वाग्नेन गृहीतवान् ॥
 बाहुमूले च शस्त्रेण रक्तोत्पत्तिकरेण च ।
 तज्जलं रक्तमिलितं स्फोटज्वरसम्भवम् ॥”

"Take the serum from the pustules on the teats of cows or from the arms of men at the end of a knife and introduce into the blood on the arm (of the child) caused by scarification with a knife. The serum when mixed with blood (of the child) causes fever of small-pox."—Dhanvantari's Śakteyagrantha, quoted in Savda Kalpadruma, Vol. V, p. 3311. Binodelal Sen's Āyurveda Vignāna, Vol. IV, p. 178.

(iv) *Syphilis*.—Was syphilis known to the Vedic Hindus? It is very difficult to solve this question with certainty. Nowhere do we find any description of its symptoms; and we find no distinct mention of the disease. Bloomfield, however, thinks the disease Jāyēnya to be syphilis. (Am. J. Ph., 11, 320; Hymns of Av., vii, 76, 559-561). Keśava and Sāyaṇa identify the disease as rājayakṣmā, i.e., the same as Jāyēnya in the story told at Tait. Saṁ., II, 3, 5, 1-3. (याज्ञ जायाभ्योऽबिन्दत् । स च जायासम्बन्धेन प्राप्नोति । निरन्तर जायासम्बन्धेन जायमानम् ।) From the remedial agents used in the Kauśika practice, viz., the string of a lute and the vivina plant (*andropogon muricatus*)—Bloomfield says, "I am tempted to regard the gayana as syphilis, etymologically either congenital disease (root *gan*), or venereal disease (*gāyā* 'woman'); in that case the musical instruments may refer to the nautch girls, and the disease is cured homœopathically and symbolically by the realisation of their presence, by means of the amulets." But the interpretation is far-fetched. Syphilis was unknown to Caraka and Sūsruta; their works were composed towards the end of the Vedic age. For the first time the disease is described in the Bhāva Prakāśa, which was composed about three hundred and fifty years ago. The antiquity of syphilis is a question in which authorities differ. Hirsch says: "In the Āyurveda of Sūsruta there are several statements which make it at least very probable that venereal disease had

occurred in India from the very earliest times." "Friedberg gives the passage, taking them from Hessler's translation as revised by the well-known Sanskrit scholar Professor Weber. Wise's handling of the history of syphilis in India (in his "Hindu System of Medicine," p. 375) is quite untrustworthy, as Friedberg justly pronounces it to be." Haeser also supported that syphilis had existed in antiquity. There are, no doubt, undoubted references in the earlier Sanskrit works to diseases of the genitals due to lewd or impure sexual connections:

तदातिमैद्युनादतिव्रजचर्याहा तथा ब्रह्मचारिणीं चिरोगृष्टां रजस्वलां दीर्घरोमां कर्कशरोमां सखीचरोमां निगृहरोमामल्पहारां मङ्गाहारामप्रियामकामामचीत्यसखिल-
प्रचालितयोनिमचालितयोनिं योनिरोगोपसृष्टां स्वभावतो वा दृष्टयोनिं वियोनिं वा नारीमत्वर्थमुपसेवमानस्य तथा करजदशनविशयकनिपातनादर्हनाह्वलाभिचाताश्चतुष्यदी-
गमनादचीत्यसखिलप्रचालनादवपीडनाच्छुक्रमूववेगविधारणाग्नेद्युनान्ते वाऽप्रचालनादिभि-
र्हन्तृभानस्य प्रकुपिता दीषाः क्षतेऽक्षते वा शयद्युमुपजनयन्ति तमुपदंशं मित्वाचक्षते ।

स पञ्चविधस्त्रिभिर्हीषैः पृथक् समक्षोरसृजा चैकः ।

तत्र वातिके पाकस्य त्वक्परिपुटनं सन्धमेदता पक्वशोफताविविधाश्च वातवेदनाः ।

पैतिके ज्वरः शयथुः पक्वोऽज्वरसङ्गाश्च सौत्रदाहः क्षिप्रपाक पित्तवेदनाश्च ।

श्लेथिके शयथुः कष्टमान् कठिनः क्षिण्णः श्लेथवेदनश्च ।

रक्तजे कृष्णकोटप्रादुर्भावोऽत्यर्थमसृक्प्रवृत्तिः पित्तलिङ्गात्त्वत्सर्वं ज्वरदाहो शोषश्च
वाप्यशेषं कदाचित् ।

सर्वज्जे सर्वलिङ्गादर्शनमवदरं श्लेफसः क्षमिप्रादुर्भावो मरुतं चेति ।

Sūtrata Saṁhitā, II, xii.

But it is known to every surgeon that there are many venereal sores which are not really syphilitic. It is only in the latter part of the nineteenth century that accurate knowledge of the different forms of venereal disease was made possible by advances in the science of pathology. And by modern historical methods, the long-discredited view that syphilis in the Old World was a disease of recent origin which could be traced to America has been revived.

In his great work on the venereal diseases, Astruc traces the introduction of the disease into Europe from the date of the first voyage of Columbus in 1494. The disease is said to be endemic in Hispaniola and on parts of the American continent. The native women communicated the disease to the men who attended Columbus; it was then propagated to the Neapolitans, thence to the French, and gradually to other European nations. The source of this information is the work of the historian Gonsalvo Ferdinand ab Oviedo, "Summary of the Natural and General History of the West Indies" (1525). Hunter in his classical work on venereal diseases in 1775 supported the idea that the venereal disease had existed in Europe before Columbus sailed from Palos: his authority being the author of "Discovery of America"—Peter Martyr, a friend of Columbus. Prescott in his "History of the Reign of Ferdinand and Isabella (Vol. iii, p. 50, Lond., 1838) supposes that this loathsome disease was not brought from America. Bodman reproduced a passage from the chapter records of St. Victor, 1472, in which "Mala Franzos" is referred to. But Block and Hegel have found out the date 1472 to be a forgery.

The origin of syphilis, as of leprosy, is lost in the night of time. There are special difficulties in the identification of diseases mentioned in ancient writings. The ancient medical authors did not write the descriptions of a disease according to modern pathology, but availed themselves of the knowledge prevalent at the time, and we find their descriptions defective. They were also not able to distinguish, as in the case of syphilis, the morbid phenomena peculiar to the different stages of the disease. The early Sanskrit authors described many local affections of the genitals, caused by immoral intercourse. One of these morbid conditions was called Upadamśa. It was a

purely local disease, and it is difficult to find any reference to affections of internal organs during the course of the disease. They did not comprehend the secondary and the tertiary stages of the malady. But we must not be surprised at this. The state of medical science was in an undeveloped stage and we should not expect in their descriptions the accuracy and minuteness of detail which characterise the descriptions of diseases of the present day. The justly celebrated Hunter, who has enriched the science of medicine with great discoveries, taught that he never observed syphilitic affections of the internal organs nor of the brain, inspite of the teachings of Fallopius and Botal to the contrary. Up to the time of Ricord, the three venereal affections, syphilis, soft chancre and gonorrhœa were not clearly differentiated. There was no doubt that venereal ulcer and gonorrhœa had always been in existence. It is creditable to the ancient Indian physicians that they differentiated the local venereal ulcer (Upadaṁśa) from urethral discharges (Meha). Certain descriptions of and references to diseases of the sexual organs in ancient and mediæval Sanskrit books could easily be taken as indicating syphilis at the time when the authors of those books lived. But on closer examination it would be recognised that the deceptive similarity between the local conditions of the ulcers did not develop symptoms which could be referred to syphilis. There is no evidence forthcoming that any causal connexion was discovered between the local ulcer and a skin eruption of the rest of the body until Bhāva Miśra wrote in the sixteenth century. There is no description of the syphilitic syndrome in any Sanskrit work before Bhāva Prakāśa was composed and in which for the first time we find a description of the disease called Feraṅga Roga or the Portuguese disease. Similar names, French Pocks by the English, Polish disease by the

Russians, Frank disease by the Turks, French disease by the Italians point to its recent introduction.

Dr. Montejo Y Robleds, a Spanish army surgeon, investigated the origin of syphilis from Spanish sources and communicated his results to the International American Congress held at Madrid in 1882: he recognised that the recent introduction of the disease was connected with America. Professor Seler in 1895 supported his conclusions; and Professor Binz arrived independently to the same view—the American origin of syphilis.

Astruc, Girtanner and Hensler in the eighteenth century endeavoured to prove the origin of syphilis in America.

Similarly the celebrated letter of Petrus Martyr in which mention is made of "*Morbus Gallicus*," dated 1489, has been shown by the recent critical investigators to be fictitious and could not have been written before 1508. Hunter's conclusions based on experiments wrongly interpreted, were founded on his notion that gonorrhœa and soft chancre were syphilitic in origin. This idea prevailed up to the time of Ricord who first clearly differentiated them. The clinical physicians in the early post-columbian period confounded the pseudo-venereal and pseudo-syphilitic diseases which resemble the syphilitic syndrome. The literature of the Old World contain no unmistakable description of syphilis prior to 1495. The results of the disinterment of bones do not furnish any proof of the existence of syphilis in the Old World in historic and prehistoric times before the same date. Not a single bone has as yet been discovered which shows undoubted signs of syphilitic degenerations, in the barrows, lake dwellings, cave dwellings, cairns and even in the burial-places of the Mediæval times.

The sudden outbreak of the disease among the soldiers of Charles VIII of France in Italy in 1494-5 attracted the attention of physicians to this loathsome disease. The

disease was unknown in Italy, and the disease in an epidemic form manifested its worst symptoms just as it does when introduced in a virgin soil. Both the Spanish authors mentioned before and the Italian chroniclers corroborate and supplement one another. The authentic reports of the contemporary Spanish authors—Diaz de Isla, Oviedo, Las Casas, Roman Pane, Hernandez and Sahagun—are in favour of the recent origin of syphilis. Columbus arrived in Barcelona in the year 1493 and syphilis spread there amongst the inhabitants. Thence it spread by the campaign of Charles VIII of France, in whose army many Spaniards served. "Syphilis had been known in Española from time immemorial, where it was called Nannavatly and the Indian method of cure by means of guaiacum and other vegetable beverages, in conjunction with hydrotherapeutic, dietetic, and climatic methods of treatment" bespeak highly for their rational method of combating the disease. Dr. Bloch's conclusion—"All available statements and facts point to the last decade of the fifteenth century—particularly the years 1493-1500—as the time when syphilis first appeared in the Old World. There is not a particle of evidence to show that the disease existed in Europe before that time"—may be accepted as the last word on the controversies regarding the origin of syphilis.

The osteological discoveries of the New World which are said to prove the existence of Pre-Columbian syphilis in the bones of the American Indians are no doubt remarkable. But the pre-Columbian age of the graves has not been definitely settled and the syphilitic nature of the changes in the bone is still uncertain.

Similarly other examples may be multiplied which may prove interesting as contributions towards our knowledge of the history and treatment of diseases. But we must not dilate any further.

Now let us consider the various ways of making the study of history of medicine popular among the medical practitioners in India :

1. *Museums*.—The establishment of museums containing relics of medical science in bygone ages is one of the great and most efficacious means for promoting the study of history of medicine. Museums containing objects of historical interests are of the utmost advantage both for education of students and the advancement of science. The specimens speak for themselves and they may be inspected with ease and rapidity. People like this objective instruction which is retained with pleasure in their memories. Such a collection of historical objects in a locality can be easily appreciated by the members of the medical profession who are ignorant of the language of the country. The museums of Aldrovandus, Hunter and Parkes proved to be of inestimable value to the advancement of knowledge. The museums generally contain some objects of exceptional medical interest.

James H. Aveling¹ remarks : “ Historically, a museum of instruments is most desirable. For want of a home, many of the interesting mechanical contrivances used by early surgeons are lost or destroyed. If they could be collected and preserved, we should have the means of observing the progress of surgery as exemplified by the development of the instruments employed in various operations. There seems to be little reverence for, or appreciation of, the inventive genius and mechanical triumphs of our surgical forefathers. Who would not like to see the *armamentarium* of Harvey which he left to the College of Physicians, and which was unfortunately destroyed by fire ? Who can gaze with indifference on the obstetrical instruments of the Chamberlens, now happily in possession of, and carefully preserved by, the Royal Medical and Chirurgical Society ?

¹ B. M. J. Dec. 22, 1888, p. 1416.

But, apart from sentiment, a collection of old instruments, as far as possible bearing the names of their inventors and the dates of their invention, would settle many disputes as to priority of invention, and prevent many surgeons claiming as their own contrivances which had been invented long ago.

"There are, however, other cogent practical reasons for establishing a museum of instruments besides those of historical and objective instruction. It is necessary for the purpose of protecting the reputations of surgeons and the lives of patients; public safety demands its existence. My experience enables me to support this statement. I have invented several instruments, and in the shops of instrument makers and at exhibitions I have often seen these instruments so altered as not only to be useless, but dangerous. The changes are usually made by manufacturers who, not knowing the method of using the instruments, make alterations which they suppose to be improvements. Now the result of selling an imperfect or dangerous instrument, informing the buyer that it is the invention of a special surgeon, is to seriously damage the reputation of that surgeon, for he who bought it must, if he detect its worthlessness, think badly of the person who has the credit of having invented it; and if the discovery of its faulty construction be not made, the patient may receive great injury. At present there is no remedy for this dangerous practice of altering instruments. By patenting perhaps some check might be effected, but this plan is not likely to be adopted by the members of a liberal profession. A question, however, might arise whether it could not be proved to be penal to alter the construction of an instrument in such a way as to injure the reputation of its inventor, and render its use dangerous to the patient for whose relief it might be employed.

"An authoritative collection of instruments and

appliances is the only remedy for the evils here pointed out. To this surgeons and instrument-makers might refer, and any doubt as to the proper form of an instrument might at once be satisfied. To this museum every new instrument should be sent, as every new book finds its way to the British Museum. Properly classified, the object sought might easily be found; and if a surgeon failed to send a specimen of his invention, he would have no just cause of complaint, should he meet with variations of it he does not approve.

“Every one must be pleased that Mr. Hutchinson has so ably brought this subject to the front at the College of Surgeons, and all will, I believe, re-echo his concluding words: ‘I cannot admit that the institution in which we are now assembled will have done all that it can for the perfecting of the art of surgery, until it has within its walls a collection, easily arranged for inspection and comparison, well labelled and catalogued, of all instruments and appliances, concerning the merits of which the practitioner may desire information.’”

A museum is a source of much instruction and information. The museums for pathological and materia medica specimens, both pharmacopœial and indigenous, can easily be started by the energetic action of our friends: specimens of drugs of all kinds with brief descriptions, pathological and microscopic specimens with short explanatory notes may be sent by the profession. These will be arranged and entered in a descriptive catalogue. Every facility should be given to students in their researches, as they may require to examine any specimen in the collections with more care and attention than can be done in the ordinary way of viewing the Museum. In the Medical College, Calcutta, we find that the subject of materia medica is sadly neglected. “The result is evident in every day practice.

One hardly ever meets a junior practitioner who can write a prescription free from errors. Prescription-writing is fast becoming a lost art, and is in danger of atrophy from disuse. Newfangled remedies of unknown and questionable value are being freely used by the practitioners, only because they have not that training to write prescriptions themselves. It is therefore very important to realise the cause of this in our profession. Of all the subjects *Materia Medica* forms the armamentarium of the physicians, but unfortunately the most neglected of all the subjects. There is no proper museum where the students can examine specimens. There is not a single demonstrator to coach the students in the subjects. Students can hardly be expected to master the subject from lectures alone, and the result is practitioners become means of advertising medium for patent and proprietary medicines. The remedy therefore is to have one or more demonstrators on *Materia Medica* whose duty will be to take the students by batches, familiarise them with the different specimens, teach them the art of prescription writing and above all, the most important question of incompatibility. These demonstrators can have a revision class before the examination and give the students a 'grind.' At present practical pharmacy is done by the students under the apothecary of the hospital, who has enough work of his own as an apothecary to devote much time and attention for the training of the students." ¹

In the collection of economic products as displayed in the galleries of the Indian Museum, there are specimens of medicinal products, indigenous drugs, narcotics (opium, Indian hemp and tobacco) and the food substances (sugar, starch and cereals). In 1895, the Indian Indigenous Drugs

Committee was founded, and the "Reporter on Economic product was appointed its Secretary. The drugs for experiment were distributed by the Medical Store Department and all the results of the clinical investigations were received in the office of the Reporter, where the meetings of the committee were held."¹ In the chemical laboratory for testing economic products in the Museum, "food products received attention, and analyses were made of numerous cereal grains, famine foods and pot herbs. Indigenous drugs were tested for their active principles and several were chemically examined for the first time. The following deserve mention: *Adhatoda Vasica*, Indian podophyllum, *kino*, *kamala*, *Waras*, Indian hemp, cinchona, Burmese storax, cutch, ipecacuanha and jalap."²

In England, John Tradescant and his son founded at Lambeth, in 1656, a general museum in which they collected all herbs in relation to medicine. Afterwards it became the basis of the Ashmolean Museum at Oxford. Soon after their time James Petiver, an apothecary to the Charterhouse, founded an important museum in London and made an extensive collection of entomological and botanical specimens. He died in 1718. All these early museums were associated with libraries. Charlton founded another museum in the Temple. Sir Hans Sloane bought the collections of Petiver and Charlton, added many more specimens and books and presented the museum to the nation, and thus formed the celebrated British Museum—a great library surrounded by illustrative collections. Fothergill was a collector of rarities and established a museum of great value. He bequeathed it to W. Hunter on the condition

¹ Indian Museum, 1814-1914, p. 68.

² *Ibid*, p. 67.

that he will have the offer of purchase at £5,000 below the real estimate.. Hunter paid £1,200 for this museum. He enlarged this museum enormously by the addition of pathological, anatomical and natural history specimens, manuscripts, books, pictures and coins: the estimated expense amounted to £20,000. This valuable museum he made a gift to the University of Glasgow.

Of special museums—that is, collections relating to one subject only—I may mention the collection of John Dee, of mathematical and astronomical instruments and other curiosities in the reign of Queen Elizabeth; the interesting collection of Edmund King, Surgeon to St. Bartholomew's, consisting of anatomical preparations as seen by Dr. Browne, the son of the celebrated Sir Thomas Browne, in 1664; the collection of fossils in small cabinets by the geologist Woodward, the founder of the Professorship of Geology at Cambridge; the justly celebrated collection of a vast series of specimens in relation to comparative anatomy, pathology and normal anatomy, by John Hunter at the Royal College of Surgeons; and lastly, the unique museum illustrating the history of medicine—the Wellcome Museum—which will be of great help to the means of studying the history of medicine.

“The Wellcome Historical Medical Museum, founded in London by Mr. Henry S. Wellcome in 1913, is now well known to those interested in the history of medicine throughout the world.

“International in character, the collection, which is being constantly augmented, covers a wide field embracing Medicine, Surgery, Pharmacy, Chemistry and the Allied Sciences.

“The Museum is designed to represent the history from the earliest times of these branches of the Healing Art throughout the world, and their practice is illustrated by

objects, instruments and appliances of historical interest and by plastic and pictorial art.

"Medical practitioners in our Colonies and distant lands beyond the seas, especially those dwelling among primitive races, can render valuable help to the study of the history of medicine by sending native instruments or appliances used for surgical or medical purposes, or figures of deities associated with healing. Any objects of an unusual or curious nature, used in or connected with the practice of medicine, such as amulets, charms or talismans, with descriptions of their use, would be much appreciated, either as gifts or loans to the Museum." ¹

"The great interest aroused by the Historical Medical Museum during the recent meeting of the International Congress of Medicine has not abated, and we learn that the daily attendance at the Museum is still large. We recommend all doctors interested in the evolution of their art to visit it before September 30th, when it will be closed, to reopen, we believe, in the spring. Short accounts of the Museum appeared in the Journal of May 10th, p. 1035, and June 28th, p. 1379. Since then considerable additions have been made to the collection; but it is Mr. Wellcome's wish to make it as complete as possible. Many families have relics such as MSS., early printed books, diplomas, prescription books, autograph letters and other documents and objects associated with, or collected by, their ancestors who were engaged in medicine, surgery, pharmacy and the allied sciences. Often, on the death of those who cherish such relics, the things are relegated to the garrets, or sent to auction rooms where they are scattered amongst strangers who buy them for a trifle as curios, and so the history and record of associations with the original inventor

¹ "The Wellcome Historical Medical Museum"—Preface.

or user are lost for ever. We venture to suggest that it would be well if these things could be sent to take their place in the Historical Medical Museum, which has now been established in London on a permanent basis by Mr. Wellcome, where they would be preserved, and at the same time form a permanent tribute to the work and memory of those from whom they have been handed down. Many things which are insignificant and of little historical value in themselves if isolated in small private collections become important when brought into association with a series of others arranged chronologically; they often supply the missing links in the chain showing the evolution of such objects. An isolated historical object may be aptly compared to a single mosaic tessera which in itself alone signifies nothing, but when put in its place with others becomes part of a picture, and thus may help to complete a lasting record of a famous deed or a great event.”¹

A museum of the type described above is unknown to Indian physicians. It is undoubtedly true that in the Resolution of the Asiatic Society of Bengal in 1814; we find: “Resolved accordingly that the Asiatic Society determine upon forming a Museum for the reception of all articles that may tend to illustrate oriental manners and history, or to elucidate the peculiarities of art and nature in the East;” and that contributions were solicited from the public, relating to various objects among which occur “mineral and vegetable preparations peculiar to Eastern Pharmacy.” It is also true that the collection of rarities by the Asiatic Society of Bengal on the plan of a great library surrounded by illustrative collections shows the zeal and earnestness of the collectors, but this collection which is the basis of the Indian Museum contains nothing of

¹ British Medical Journal, September 18, 1913.

interest in relation to medicine. It is like the collection of Francis Calceolari in Verona in 1422 : " Whatever the earth possesses, whatever has been hidden in the depths of the sea, the taste and skill of Calceolari has collected." The Medical College collection of pathological specimens is a good one but it is mainly intended for the use of students. But there is no museum, the object of which is to stimulate the study of the great past in connection with the history of medicine, chemistry, pharmacy, and the allied sciences by a collection of historical objects illustrating the development of the art and science of healing throughout the ages. Such a collection will elucidate many controversial points in relation to the origin and use of remedial agents, in respect of the history of diseases, and in connection with the early methods employed by medicine men in different parts of the world. It is highly desirable that we should form a body to collect informations " in regard to medical lore, early traditions or references to ancient medical treatment in manuscripts, printed works, etc." Such a museum will contain exhibits which may be classified according to the methods adopted by Mr. Wellcome in his Historical Exhibition.

2. *Exhibitions.*—The exhibitions, on a small scale, had been held in Calcutta, Madras and Bombay, in connection with Medical Congress and Âyurvedic Conference. But these were of a local character though they included specimens from manufactures other than Indian. An exhibition, international in character, is highly useful for the improvement of medical arts and trade. It brings distant countries into closer connection with India and materially helps in the development of new industries and in the promotion of the commercial prosperity of India. It attracts the attention of foreigners to the great natural wealth of India and to the benefit derivable from the profitable commerce

which the country presents. It gives an impetus to manufactures suited to India. Such exhibitions will give our people opportunities and facilities of studying the possibilities and avenues of industrial regeneration. In the exhibition, not only imported articles but articles manufactured in the country should be exhibited and it would be found that goods made in India to be equal in quality to those that were imported. Surgical instruments in common use manufactured in India may compare favourably with similar articles of foreign make. The exhibits should be classified—the products of the animal, vegetable and mineral kingdoms. The edible oils, foods and food stuffs, medicinal products, drugs and chemicals should be collected: these should include the cereals, seeds including pulses or peas and nuts, vegetables, tubers, bulbs, roots and stems, fruits, starches, sugars, molasses, condiments and spices. Jams, essences, preserved fruits, pickles, confectionary, animal food stuffs (milk and its products, fish, meat, preserved and dried fish), and mineral food stuffs; salts and edible earths; narcotics and stimulants: tea, coffee, cocoa, tobacco, spirits, toddy and wine, opium; drugs comprising indigenous drugs and poisons, cinchona and its alkaloids; soaps and perfumery. There should also be collected appliances connected with sanitation and hygiene, surgical instruments—ancient and modern, splints, hospital appliances, ambulances, drainage material and other objects connected with health and physical education.

As an example let us consider the disease small-pox. We may collect evidences of primitive vaccination and inoculation among the different nations of the world. The materials illustrating the subject may be shown at the exhibition: the instruments used in the operation; methods of operation; gods and goddesses in connection with the

disease ; origin of inoculation ; its spread ; its practice ; its prohibition by law in different countries ; origin of vaccination ; its spread ; its beneficial effects ; and the importance of segregation, quarantine, etc.

Primitive Vaccination.—In the November issue of *Hygieia* in the circular of the International Hygienic Exhibition which was held in Dresden in 1912, we find that vaccination or inoculation, which is commonly regarded as a triumph of modern medical science, has long been practised by the civilized races of Asia, and even by African and other savages probably as a result of Asiatic influence. We first meet inoculation for small-pox among the Chinese. Lockhart gives the following quotation from an old Chinese manuscript, which was probably written early in the fourth century : “The ancients possessed the knowledge of inoculation of small-pox. It has come down to us from the reign of Chua-tsung of the Ling Dynasty, and was discovered by a philosopher. When the disease breaks out spontaneously it is very serious and often fatal but when it is produced by inoculation it is usually mild and does not cause more than one death in ten thousand cases.” In Persia inoculation is accomplished by scratching the forearm and rubbing into the slight wound, after bleeding has ceased, the pulverised scurf which falls from a small-pox patient. The Ashantee negroes, according to Bowditch, inoculate in seven places on the arms and legs. The Moors practise this method. The Siamese have the peculiar custom of blowing the scurf into the nose. An interesting collection of materials illustrating this subject was shown at the Dresden exhibition.¹

The different modes of infection were well known to the Hindus :

¹ Scientific American, Supplement, 1911, Jan.-June, Vol. LXXI.

प्रसङ्गात् नाचसंख्यशक्तिः शास्त्रात् सङ्कीर्णमात् ।
 एक श्रव्यासनाथेव ब्रह्ममाख्यानमुपमात् ।
 कुतश्चरथः शेषस्य नेचामिष्यन् एव च ।
 औपसर्गिक रोगाश्च संक्रामन्ति गराक्षरम् ॥

Nidāna.

Inoculation for small-pox is still practised to some extent as a protective measure in India, for, as is well known, the mortality from the inoculated disease is much less than from the infective disease, and the form of the disease is milder in the former than in the latter case. Material from a small-pox pustule is taken, mixed with water and introduced under the skin with a lancet. The site for inoculation is the flexor surface of the forearm (Punjab) or the wrist. This practice is of great antiquity in the East. It was introduced into England from Turkey by Lady Mary Wortley Montague in 1763. During the first quarter of this century it was practised in preference to vaccination. Inoculation for small-pox in England was made illegal by Act of Parliament in 1840.¹ Inoculation was declared to be illegal in Ireland by the fourth section of the 'Vaccination Amendment (Ireland) Act of 1868 (31 and 32 Vict., Cap. 87).'

James Moore in his "History of Small Pox, London, 1802," traces the first appearance of the disease in China, on the authority of a Chinese treatise written long before Christ and entitled "Teontahinfa" ("Heart Words on the Small Pox") to the time of the Tsche-u dynasty, or the period between 1122 and 249 B.C. "In a short article on "Small Pox in China" Mr. F. Porter Smith tells us that the disease dates from the reign of the first emperor

¹ Footnote to the Report of the Leprosy Commission in India (1890-91.), p. 10,

of the (Eastern) Hun dynasty, Kwang Wu, who reigned A. D. 25-28. Certain it is that inoculation has been practised among the Chinese for a thousand years or more."¹

Inoculation has been practised amongst the Chinese from dim antiquity and its origin is lost in mythical genesis. At the present day, as from early times, three methods of the artificial production of small-pox are practised : (a) the scab from a dried small-pox pustule after being pulverised, is blown up the nostril ; (b) the clothes of a person suffering from small-pox are worn by the person to be infected ; (c) the matter from a small-pox pustule is inserted beneath or on the abraded skin."²

The operation had been practised from time immemorial in China and also in Persia. The Chinese plan of giving small-pox to persons in health consisted in inserting into the nostrils tents of charpie covered with dried crusts of the variolous eruption. They called the procedure 'sowing the small-pox.' From China and Persia inoculation or 'engrafting' was introduced into Georgia, Circasia, Turkey and Greece. In 1717 a very clever English woman, by name Lady Mary Wortley Montague, wife of the British Ambassador at the Ottoman Court, wrote home glowing accounts of the marvellous results of inoculation as practised at Adrianople, among other persons upon her own son, a boy six years of age. Her influence led to the open adoption of the procedure in England in April, 1721, and two years later, in 1723, Dr. Bryan Robinson, sometime President of the King and Queen College of Physicians, first performed the operation in Ireland. Many years elapsed before it obtained a footing in France, where at first it had been rigorously prohibited

XXth Century Practice of Medicine, Vol. XIII, p. 363.

B. M. J., 1899, Vol. II, p. 761.

by law; but in 1756 the children of the Duke of Orleans were inoculated, and in 1758 the practice was introduced into most of the large towns."¹

In the letter referred to above she writes: "Every year thousands undergo this operation (*i.e.*, inoculation) and the French Ambassador says pleasantly that they take the small-pox here by way of diversion, as they take water in other countries. There is no example of any one that has died in it and you may believe, I am very well satisfied of the safety of the experiment, since I intend to try it on my dear little son."²

All exhibitions have an educational value, especially in a country where the mass of the population is illiterate and the women live a secluded life. I quote an extract from the speech delivered at the opening of Convocation by the Hon'ble H. J. Reynolds, Vice-Chancellor of the Calcutta University:—"I speak of the Exhibition to-day," Mr. Reynolds said, "as an educational agency, and as such it cannot but have made an impression even on the most simple rustic, who regarded it with a kind of stolid wonder,—as a mere *jádughur*, a mere palace of magic. The Exhibition is a school which has brought something even to such unpromising pupils as these, and still more it has aroused the interest and quickened the intelligence of the Indian craftsman and citizen. Next, it has been a mighty power in breaking down those traditional habits which in this country seclude the female sex from association with men. No one can have visited the Exhibition without being struck with the number of native ladies who were to be met with in its courts and galleries. Arrangements were made for setting aside certain days and hours for their visits, but this scheme was only partially successful.

¹ XXth Century Practice of Medicine, Vol. XIII, p. 462.

² The Letters and Works of Lady Mary Montague.

They found that they could enter among the general throng of visitors without being in any way molested or annoyed, and they availed themselves freely of this newly-discovered liberty. I saw it stated not long ago in the papers that nearly 50,000 native ladies had thus visited the Exhibition ; and if this statement is correct, the fact is one of which it would be difficult to exaggerate the importance."

Nothing could be simpler or more effective for the purpose of instruction than such exhibitions. The exhibits dealing with historical matters have great value. They may be devised either to treat of general history of medical science or of historical matters of special local importance. Such an exhibit might be designed either to be complete in itself or to form part of a central exhibition. An exhibit may be permanently centred in a town, where people from various parts of the country resort, or so arranged as to be circulated among cities of more or less importance. Demonstration should be given in conjunction with exhibits. Representations of Ayurvedic dispensaries, and indigenous drug shops in which are collected the various kinds of herbs used for medical purpose, pharmaceutical apparatus and surgical instruments, gods and goddesses of medicine in Indian mythology, method of teaching the students, relation of physician and his patients, charms and talismans fastened round the patients' body in order to protect him from evil spirits, temple sleep as practised in famous temples, religious offerings to gods by the Brahmins for cure of the incurable diseases, etc., may form a most interesting exhibition.

A Health Conference and Exhibition may be held in a manner to appeal to all classes. The simple practical methods of sanitation which are attainable to even the humblest villagers, the practical measures that may be undertaken for child-welfare work for the saving of

infants' lives, and the laws of school hygiene to maintain standards of efficient citizenship may be demonstrated and will be highly appreciated by all classes of people. The working programme which follows I have quoted from Mr. Wellcome's classification of Exhibits in the Historical Medical Museum :

CLASSIFICATION OF EXHIBITS

Section 1.—Medicine.

(a) Animal medicine ; materia medica of the animal creation : traditions concerning the connection of animals with the healing art.

(b) Medical deities of savage, barbaric and other primitive peoples ; figures, fetishes, charms, implements and other objects associated with the art of healing.

(c) Antient deities of healing and other subjects associated with the art of healing by early primitive peoples and the early civilisations.

(d) Votive offerings for health (*Donaria*), amulets, amuletic medicines, gems, emblems, talismans, rings, charms and other objects connected with the art of healing.

(e) Paintings, drawings, engravings, etchings, photographs, models, bas-reliefs, sculptures and casts of medical interest.

(f) Pictures and miniatures from MSS. of all ages, of medical, surgical, pharmaceutical and alchemical interest.

(g) Portraits in oil, water-colour or wax, miniatures, silhouettes, etchings and engravings. Sculptured figures or busts of physicians, surgeons, alchemists, botanists, apothecaries, chemists, pharmacists, nurses, etc., of all periods.

(h) Pictures of medical, chemical and pharmaceutical institutions of all nations.

(i) Pictures representing the important epochs and interesting events, such as original operations, discoveries, etc.,

in the history of medicine, surgery, chemistry and pharmacy.

(j) Medals, medallions, plaquettes and coins of historical medical interest.

(k) Rare and curious MSS., xylographs, incunabula, early printed books and works of especial historic interest, periodicals, pamphlets, book-plates, etc., of, and connected with, medicine, surgery, pharmacy, chemistry, botany and the allied arts.

(l) Historic letters, prescriptions, autographs, case and note-books, records of experiments, ancient diplomas, licences, corporate insignia, and personal relics of medical, pharmaceutical and chemical interest.

(m) Relics of the influence of astrology on medicine, horoscopes, and other astrological diagrams bearing on the art of healing.

Section 2.—Surgery, Dental Surgery, Veterinary Surgery and Anæsthetics.

(a) Instruments used in surgery by prehistoric and savage peoples.

(b) History and development of instruments and appliances used in surgery from the earliest times.

(c) Curious surgical appliances used in ancient times; barber-surgeon's bleeding basins and bowls, cupping instruments, etc.

(d) Improvised instruments and appliances that have been used in emergencies, especially those that have led to inventions and discoveries.

(e) Calculi, and other curious specimens of historical interest.

(f) Relics of ancient dentistry; early artificial dentures.

(g) Ancient dental instruments and appliances.

(h) Ancient instruments used in veterinary surgery.

(i) Historical apparatus connected with the discovery and use of anæsthetics.

Section 3.—Anatomy, Pathology, Obstetrics, etc.

(a) Curiosities of anatomy, and curious anatomical models in wax, ivory, etc.

(b) History of the nomenclature, causation and treatment of the most important diseases that have afflicted mankind from the earliest times.

(c) Obstetric chairs, and other appliances used in early midwifery practice, the lying-in-room in ancient times, models for obstetrical teaching.

(d) Manacles and other appliances used in the treatment of the insane in ancient times.

Section 4.—Ophthalmic and Philosophical Instruments, etc.

(a) Ancient spectacles, eye-glasses and instruments used as an aid to sight.

(b) Ancient instruments and appliances used for testing sight.

(c) The microscope from the earliest period.

(d) Historic microscope.

Section 5.—Hygiene, Public Health and Preventive Medicine.

(a) Objects of interest, ancient and modern, connected with public health, preventive and tropical medicine.

(b) Masks, and other preventive methods of protection used against plague in ancient times.

(c) Exhibits illustrative of physiology, anthropology, microscopy, bacteriology, biology, parasitology and geography.

(d) Placards, posters, manifestos, declarations concerning health and disease, etc.

(e) Ancient bills of health.

Section 6.—Pharmacy.

- (a) Ancient pharmacies.
- (b) *Materia medica* of all ages, specimens of ancient medicines and remedial agents of various periods.
- (c) Specimens illustrating the use of animal substances in medicine.
- (d) Early and curious relics of pharmacy.
- (e) Ancient stills, alembics, mortars and pharmaceutical apparatus.
- (f) Specimens illustrating the history of early pharmaceutical preparations.
- (g) Curious bottles, carboys, ointment and specie jars, drug vases, pots, ewers, mills, containers, and implements and appliances used in pharmacy.
- (h) Scales, weights and measures of all ages.
- (i) Ancient prescriptions and curious pharmaceutical recipes and recipe books.
- (j) Ancient prescription books and price lists.
- (k) Ancient counter bills, labels, business cards, curious advertisements and trade tokens.
- (l) Old travellers' note-books and curious orders.
- (m) Ancient apothecaries' shop signs and early fittings, early pharmaceutical preparations and specimens of obsolete and curious medical combinations.
- (n) Ancient and modern medicine chests, civil, military and naval.

Section 7.—Chemistry and Botany.

- (a) Alchemists' laboratories.
- (b) Ancient still, and apparatus used by early alchemists.

- (c) Historical apparatus used by famous discoverers.
- (d) Products and preparations, ancient and modern, of chemical and scientific research.
- (e) First specimens of rare alkaloids, and other preparations made by their discoverers.
- (f) Rare elements and their salts, etc.
- (g) Curious astrological, magnetic and early electrical appliances.
- (h) Ancient herbaria.
- (i) Specimens of abnormal plant forms and curious roots used in medicine.
- (j) Relics of famous botanists.

Section 8.—Hospitals, Nursing, Ambulance, Dietetics and Alimentation.

- (a) Objects connected with early hospitals and general nursing.
- (b) Early appliances used in nursing the sick.
- (c) Ancient bed-bottles, urinals and bed-pans.
- (d) Naval and military nursing, ambulance appliances and equipments.
- (e) Relics and objects of interest associated with nurses.
- (f) Relics of foundling hospitals.
- (g) Ancient methods of grinding corn, baking and cooking.
- (h) Curious articles of food and culinary implements.
- (i) Methods of infant and invalid feeding in all ages. Historic menu-cards.

Section 9.—Toxicology and Criminology.

- (a) Specimens of rare and curious poisons.
- (b) Historical objects connected with famous poisoning and other criminal cases.
- (c) Curious methods of torture and execution.
- (d) Improvised instruments used for criminal purposes.

Section 10.—Quackery.

- (a) Ancient and modern pictures, prints and relics of notorious quack doctors.
- (b) Ancient and modern specimens of quack medicines, preparations and appliances.
- (c) Old bills, placards and pamphlets referring to quack medicines.

Section 11.—Adulteration of Foods and Drugs.

- (a) Specimens showing the adulteration and falsification of drugs, medicines, foods, fabrics and other articles affecting health, or associated with medicine, pharmacy and allied sciences.

Section 12.—Photography.

- (a) Objects illustrating the invention and history of photography.
- (b) Early cameras and apparatus.
- (c) Daguerrotypes.
- (d) Portraits of the pioneers of photography.

(e) Original papers and MSS. connected with photography.

(f) Application of photography to medicine and surgery, X-ray photography.

(g) Early and rare apparatus.

(h) Curiosities of photography and its latest developments.

3. *A scientific library for India.*—At present we have no good modern scientific library in India. A good library is, however, indispensable to the disciples of Esculapius. The votary of science needs his library as well as his laboratory for the advancement of his department of research.

“During the past dozen years from time to time complaint has been heard of the need of a library of scientific books and periodicals for India. At present we cannot be said to have any such thing as a good modern scientific library in India. What indeed have we in the way of medical libraries? We only know of the useful collection of books in the office of the Director-General in Simla. This consists of a large number of old volumes, of many bound sets of medical periodicals, and a good collection of modern books on the various branches of medical science, but these cannot be of use to the worker in India, they are necessary as works of reference for the Director-General himself. Doubtless the Pasteur Institute has by now a fair collection of modern periodicals and books on bacteriology. In Calcutta there is a Medical College Library for the use of the staff and the students, good as far as it goes, and there is a fair collection of old and new books in the office of the Inspector-General of Civil Hospitals, which books are available for use of Civil Surgeons in Bengal.

“The Asiatic Society of Bengal has a fine collection of scientific books and especially periodicals, but the

proportion of medical periodicals is very small and naturally so, as this great Society, though largely supported by medical officers, is in no sense a medical or even only a scientific society.

"We have no exact information as to the resources of Madras and Bombay or Lahore, no doubt all the Medical Colleges have useful libraries for the use of their staff and students.

"Something more than this is badly needed in India. A Central Medical Library containing all books of reference, periodicals relating to the medical sciences is what we need. Such a library should be centrally situated, it should consist of two parts, a library of reference and a circulating library. It should be in charge of a paid librarian, who should know sufficient of French and German to hunt out references, and if need be translate passages for workers requiring references.

"The circulating library should possess several copies of all the best modern books on medicine, surgery and allied sciences, these should be available for medical officers all over India. An annual fee should be charged for the use of the library of small amount, and a deposit should be exacted against the value of books lent. There should be strict rules for the return and proper packing of books lent, and a limited period put as to the number of days or weeks a book lent out should be kept by the reader.

"A nucleus of such a library would be obtained by the transfer of many books from some of the small libraries above-mentioned.

"Let us glance for a moment at the establishment of the library at Manila. This library commenced with a nucleus of only fifty books in July, 1902; by May 1905 it contained 17,350 volumes. This consists of 250 periodicals in all branches of science, of the latest editions of scientific

books published in Europe and America, copies of reports, etc. At first the library was to be for reference only, but owing to a growing demand at the beginning of 1904, arrangements were completed by which all persons employed in the various departments of Government might take out 'borrowers' cards' subject to the provision of certain rules. A catalogue has just been published by Miss Mary Polk, the Librarian, and the library is now in a position of great usefulness, and the worker in Manila no longer feels the isolation and want of books of references which so greatly hinders the worker in the tropics."¹

An increase of books in the library should be constantly kept in view, and an attempt should be made to procure as perfect and extensive a series as possible of the transactions and proceedings of all the learned medical societies which now exist or have existed in different parts of the world. The catalogue of serial publications of learned societies, state governments, universities, public and private libraries should be collected. Letters should be sent to all the societies with a request that deficient series of volumes or parts of volume be supplied and books which are not to be found in the Catalogue of the Library be furnished from duplicates at the disposal of the different libraries of the world.

The medical periodicals save us a vast expense which would otherwise be incurred for procuring many expensive works. In these periodicals we may read the lectures and opinions of the celebrated medical men of the civilised countries, and thus come into close contact with an influence of the great pioneers of science;—the personal magnitude of a great mind acts as an incentive to future discovery.

¹ I. M. G., October 1905, p. 387.

The library should contain the best systematic monographic and elementary works in different languages. It should keep alive the interest of the average readers in books. In selecting books for purchase, preference should be given to monographs and periodicals which have reference to tropical climate. Always remember the remarks of Lord Avebury : " It is one thing to own a library ; it is quite another to use it wisely." The library should have a fair collection of Old English and Oriental medical literature whether in European or Oriental languages. The librarian should not only be a book-lover but an erudite and discriminating student of medicine, ever ready to help the authors of any recent contributions on their subjects with necessary materials which may be of good service. All photographs, negatives, maps, charts, and drawings should form part of the library. The members should testify their liberality and taste by voluntary contributions to the library, in the shape of rare and important monographs and volumes of standard medical works of reference. The Stillé Library of the University of Pennsylvania is a monument to his love of the literature and history of the science of medicine. Such a library would be a great boon to the medical profession not only of Calcutta, but of more wide areas and will be the means of bringing all sections together in friendly union. Interesting collections of books may be purchased—especially of erudite medical scholars. In Europe such collections often secure good prices. As an instance I quote here remarks on the sale of a famous collection of a medical antiquarian.¹

" During the week Messrs. Knight, Frank, and Rutley have held an interesting sale, at their Auction Galleries in Conduit Street, of books, engraved portraits, manuscripts,

¹ B. M. J., Aug. 26, 1905, p. 449.

engravings, and antiquities, formerly the property of Thos. J. Pettigrew, F.R.S., F.S.A. (1791-1865). The sale was by order of the executors of a descendant, in whose possession the collection had remained since the death of the well-known surgeon and antiquarian in 1865. The fact that forty years had passed added interest to a collection which represented the life-work of a man who played no small part in advancing medical and antiquarian knowledge in the earlier part of the last century. In spite of the holiday season the sale attracted a large attendance, and good prices were obtained. The catalogue contained 260 lots, of which nearly half were books, pamphlets, and manuscripts. The first five lots were the earlier volumes of the *Journal* of the British Archæological Association, in which Pettigrew took a leading part from its foundation in 1843. He acted as its treasurer, and some of the earlier meetings were held at his house. There were several works illustrated by George Cruikshank, in their original paper covers, and bearing the autograph and inscription of the artist to his contemporary and friend, Pettigrew, for whose work on the *History of Egyptian Mummies*, published in 1834, Cruikshank drew the coloured plates. Of this work an important remainder was sold. The original drawings for the coloured plates were included amongst the drawings and engravings. The most important item amongst the books was Lot 76, *Gulielmi Harvei Exercitatio anatomica de motu cordis et sanguinis in animalibus*, Francofurti, 1628, first edition. This small and brief pamphlet, not exceeding in length an average medical lecture or address, realized £30. The catalogue included remainders of some of the well-known works with which the name of Pettigrew is associated, such as the *Bibliotheca Sussexiana*, of which the first volume appeared in 1827 and the second in 1839; Pettigrew's *Medical*

Portrait Gallery : Lucien Greville with George Cruikshank's etched illustrations, 1833. The collection of engraved portraits of physicians, surgeons, and medical writers, chiefly of the latter part of the eighteenth and the beginning of the nineteenth centuries, realized upwards of £50. It included three portraits of Edward Jenner: an impression of the three-quarter length, of the doctor leaning against a tree, drawn and engraved by J. Smith, was sold for £5 15s.; and two others, one by W. Sharp and W. Skelton, after Hobday, in proof state, and the other by W. Say after Northcote, realized £7. There were several portraits which recalled Pettigrew's connexion with the Medical Society of London and the Royal Humane Society, notably those of Lettsom and the Duke of Kent, of which the original copper-plates, engraved by Skelton, were sold. It was through the influence of Lettsom that Pettigrew became Secretary to the Royal Humane Society, and it was there that he made the acquaintance of the Duke of Kent, who appointed him surgeon extraordinary, and subsequently surgeon in ordinary to himself and the Duchess of Kent. In that capacity he vaccinated their daughter, the late Queen; the lymph was obtained from one of the grandchildren of Lettsom. The Duke of Kent brought Pettigrew under the notice of the Duke of Sussex, and the latter made him surgeon in ordinary and also librarian to Kensington Palace, so that indirectly the influence of Lettsom led to the compilation of the *Bibliotheca Sussexiana*. Amongst the miscellaneous engravings, Lot 177—a set of four relating to the *Victory*—realized £7 10s., and were of interest as recalling the fact that Pettigrew's father was a naval surgeon and served in the *Victory*."

The librarian should always bear in mind, that the call to-day was for a greatly improved library service, and

that one of his functions was to direct the public taste for books, so that the people might learn to distinguish what was good, original and sound from what was futile and useless. The main purpose of a library was to meet the intellectual needs of the students after they had done with their purely academic studies. But he should on no account throw away books which seems to him useless. Dr. Arthur Ernest Cowley, Librarian of the Bodleian Library, Oxford, one of the chief speakers at the Conference of the Library Association which concluded at Cardiff recently, said that at the Bodleian Library they got rid of nothing. Whatever they received was deposited there for all time, and it would be dangerous, even if they had the power, to discard or to refuse to receive anything. "For instance," he said, "when the First Folio of Shakespeare was sent to us in 1623 we received the copy in sheets and bound it. In 1664 we had a newer edition. This was therefore thought a better edition, and so the first folio was sold probably for a very few shillings. All trace of it was lost for 240 years, until in 1905 it unexpectedly emerged from a country-house library and was identified with complete certainty. It was then bought back by the Library for £3,000."

The teachers should encourage their students to undertake research in the public libraries. It is desirable that the librarian should be a member of our profession, otherwise it would be difficult for him to help scholars to learn anything from the history of medicine in any of its branches. The Libraries of the Calcutta Medical College and Carmichael Medical College, I am sorry to remark, have not been, but should be placed, in charge of scholars who have been well-informed physicians.

4. *Lectures*.—Popular lectures on subjects of historical interest may be arranged for illucidation of historical

truths. A series of lectures may be delivered as regards the history of medicine in various countries as medicine men existed in all countries: the medicine in India, Egypt, Babylon, Assyria, Greece, Rome, Arab, China, Japan, etc. The relation of priest and physician offered interesting studies. The medical ethics—its rise and progress—and its present position among professional men may be dilated upon in a series of lectures. As regards the history of medicine in Britain, the Fitz-Patrick Lectures are replete with information on medical study in London during the Middle Ages, English medicine in the Anglo-Saxon times, the Arabian medicine, and other interesting subjects. The Harveian Orations deal with important historical studies: the relation of Harvey to his great predecessor Galen; appreciation of the works done by his companions and contemporaries; commemoration of the good deeds and the munificence of the founder, benefactors and donors of the Royal College of Physicians. Lectures on the history of medicine may deal with the general study of its philosophy, the exposition of various theories which have been used in by-gone ages, the lives and works of ancient physicians, and the epidemics of past ages: these informations cannot but be instructive and useful to us.

5. *Pictures and Drawings.*—The aid of pictorial representation in studying history of medicine may here be best shortly adverted to. A collection of portraits, etc., are essentially necessary for a systematic study of the subject. Who does not like to see the features of eminent surgeons and physicians—the real benefactors of human race! So we should preserve the likeness of such men. Pictures of ancient hospitals, pharmacies, dispensaries, surgical operations, surgical instruments and appliances, and ambulance equipments should be collected from

different countries of all ages and scientifically studied with reference to evolution of medical knowledge. It has been said: "A few scratches with a pen are better than whole pages of the most elaborate description"—*Mrs. Jameson, Legend of the Madonna.*

"Segnius irritant animos demissa per aurem
Quam quæ sunt oculis subject fidelibus."

Hor. Epist. ad Pisones, l. 180.

"Things by the ear received, men's minds excite
Much less than when submitted to the sight;
For the spectator with his trusty eyes,
To his own mind impression best applies."

Translation by Andrew Wood, M.D.

The importance of illustrations in books of medical science is apparent to the students of medicine. The pictorial representations of "Domestic Sanitary Defects"—a book by T. Aridgin Teale, M.A., Surgeon to the General Infirmary, Leeds, shows at a glance every important fault to which domestic sanitary arrangements are liable. The disastrous effects of small pox, the benefits of vaccination, the good effects of pure air and water, ventilation of dwelling houses, school buildings, barracks, etc., may be better shown by wall diagram, pictures, and magic-lantern slides than by written descriptions. To help students in their study of history of medicine various devices may be improvised. As an example, let me mention the *Historischer-Medicinal Kalendar* :

A MEDICAL ALMANACK: "This almanack is printed in 183 sheets, to be torn off every other day as the year advances. Professors PAGEL and SCHWALBE have clearly

devoted much care to their *Historischer-Medicinal Kalendar*.¹ Each sheet, about 9 inches in length and over 3 inches in breadth, bears at the foot the dates of two consecutive days, with the usual astronomical and ecclesiastical notes. The middle of the page is devoted to short notices of the medical worthies of every age who began or ended their careers on the corresponding days, British authorities being duly honoured. The text also includes notes on medico-historical events, quotations from standard authors on medicine and doctors, and pieces of folk-lore. The essential feature of this almanack is an illustration at the head of the page. Several collections have been laid under contribution; the reproductions of the Dutch school of the seventeenth century are exceedingly good, so are the copies of yet older woodcuts from medical works of the Paré type. There remains a considerable proportion of facsimiles of medals commemorating the cholera at Hamburgh, the visit of Napoleon III and Eugénie to a cholera ward, the Red Cross Union and others less pleasing, and of the character rated by second-hand book-sellers as "curios." The elaborate medal representing literally the figurative purgation of Louis XIV by the Pope and the Bey of Tunis would seem to show how that monarch was hated outside his own kingdom, until we find a similar work of art bearing the figures of Louis, Marlborough, and Eugene under the influence of a drastic judge, an unsavoury metaphor expressing the relief felt by all concerned when the Peace of Utrecht was signed."

The portraits of some of the professors of the Calcutta Medical College have been collected in the college; but the

¹ *Spemann's Historischer-Medicinal Kalendar, 1905.* [Spemann's Historico-Medical Almanack for 1905.] Bearbeitet von Professor Dr. J. Pagel und Professor Dr. J. Schwalbe in Berlin. Berlin and Stuttgart; W. Spemann. (M. 2.)

portraits of ex-students of the college who have made their names famous in their country are to be found nowhere. The lives of the alumni of the college should be narrated in a Roll of the College with their portraits. The Annual Medical list as published under the direction of the Bengal Council of Medical Registration pursuant to sub-section (1) of section 32 of the Bengal Medical Act, 1914, supplies us with the qualifications of the physicians and surgeons, but it gives us no information as regards the work done by them in the domain of special subjects followed by them.

It is unnecessary to dilate this Introduction any further. I conclude it with the remarks¹ of Adams: "Surely every age ought to endeavour to benefit by the experiments, whether successful or otherwise, of all preceding ones; instead of every generation commencing a new series of trial, and wandering over the same ground in search of truths which had been long ago discovered; or in stumbling through the mazes of error without regarding the beacons set up by their forefathers to direct the footsteps of their descendants. If the wisdom of antiquity be entitled to high reverence in any case, it surely is so in medicine, founded as this art especially is on general observation and experience."

¹ Paulus Aegineta, Vol. I, Sydenham Society's Publications, p. vii.

APPENDIX I

PROGRESS IN INDIGENOUS MANUFACTURE.

Medicines Available in Large Quantities.

“A noticeable feature in Calcutta in recent years has been the remarkable progress made in the manufacture of drugs and pharmaceutical preparations out of indigenous materials. Thus it is now found that many of the dispensaries large and small, private and State, are largely using locally-procured medicines and drugs in preference to those imported from other countries. This change is due to the strong advocacy, by well-known medical men, Indian and European, for the development of this branch of local industry and the whole-hearted co-operation by the Government in this direction. Prominent members of the Indian Medical Service and well-known scholars of scientific research pointed out to the Government and the people the necessity for this industry from financial and other considerations.

Among Indians, those who were advocates of a more extended substitution of locally-procured drugs held that the advantage might not be so much in the financial saving to the country as in the more extended use of serviceable drugs. No one who had looked into the question of the remedial agents sold in the village drug-shops could doubt that many, in fact the majority, were worse than useless. The few that were good were neglected and largely so because of the cry for imported drugs and it was a frequent complaint that European pharmacy was

obliterating all knowledge of the time-honoured drugs of this country. There was an awakened interest in the subject of India's indigenous drugs and monumental works by an army of European savants replete with particulars regarding the drugs of India gave the results both of personal investigation and of a laborious enquiry into recognised sources in the contemporary medical world. With the establishment in India of Universities and medical schools where European medical science was taught there soon arose an army of pupils, not unworthy of their masters. And their labours in the field of pharmacology coupled with the sympathy of well-known members of the Indian Medical Service gave an impetus to the investigation the possibilities of indigenous medical drugs.

In 1918 the Board of Scientific Advice accepted a proposal for the formation of a Drugs Manufacture Committee to investigate the possibilities of the cultivation of medicinal plants in India and the manufacture of drugs from them on a commercial scale. The Government of India acted on this recommendation and appointed a committee whose primary functions will be to investigate. The possibilities of the cultivation of medicinal plants in India and (2) the manufacture of drugs from them on a commercial scale. And it was also proposed that the committee should consider the various lines on which the investigation can best be undertaken and also the present position as regards the manufacture of drugs in India from indigenous products and the Indian requirements of such drugs as have hitherto been imported from abroad. As soon as experience has proved that any drug can be manufactured at Government Medical Store Depôts at a sufficiently low cost, private enterprise will be invited to undertake its manufacture. It is learnt that considerable progress has now been made and that several articles

which before the war were imported, are now being manufactured in India.

Although much yet remains to be done before the resources of India can be fully utilised in the production of drugs, the following list of articles which are wholly or in part derived from Indian sources shows that some appreciable progress has been made. These articles are ; Absolute Alcohol, Acids—Hydrochloric, Nitric and Sulphuric—Alum, Ammonia, Argenti Nitrates, Caffeine, Calcium Carbonate, Calcium Chloride, Calcium Phosphate, Castor Oil, Collodion, French Chalk, Glucose, Kerasine Solution, Lysol, Magnesium Carbonate, Magnesium Sulphate, Morphia, Oleic Acid, Oils of Linseed, Dill, Cloves, Carraway, Cedarwood, Croton, Sandalwood, Theobroma, Eucalyptus and Turpentine ; Pharmaceutical preparations of Aloes, Asafoetida, Belladonna, Benzoin, Cinchona, Colocynthis, Digitalis, Hyoscyamus, Indian Hemp, Liquorice, Nux Vomica, Opium and Squills ; Plaster of Paris, Potassium Carbonate, Prepared Chalk, Pyroxylin, Rectified Spirit, Soft Soap, Sodium Arsenite, Sodium Carbonate, Sodium Chloride (chemically pure), Sodium Nitrate, Sodium Phosphate, Sodium Sulphate, Starch, Sulphate of Iron, Talc, Tannic Acid and Thymol.

Many of the above have been manufactured in India for the first time and are now available for sale in large quantities.”—*The Englishman*, October 11, 1922.

**NOTICES,
BIOGRAPHICAL AND BIBLIOGRAPHICAL,
OF THE
AYURVEDIC PHYSICIANS
AND THEIR WORKS ON MEDICINE**

History of Indian Medicine

CHAPTER I

BRAHMĀ

The Hindus believe the science of medicine to be of divine origin. In the R̥gveda,¹ we find a verse addressed to god Rudra: "I hear thou art the best of physicians." He is also described as "the depositary of all sciences," and "the possessor of healing medicines." In the Yajurveda, he is referred to as "the first divine physician"² "who drives away all diseases." In the Atharvaveda, we find: "(The god) that has caused (disease) shall perform the cure. He is himself the best physician. Let him indeed, the holy one, prepare remedies for thee, together with the (earthly) physician."³

Brahmā, the first member of the Hindu triad, was the propounder of the healing art—the Āyurveda or the Science of Life. It is said to be an Upaveda of R̥gveda.⁴

Dhanvantari, however, taught Suśruta that it had been composed by Brahmā as a sub-division of the

¹ मिषक्तमम् त्वा मिषजां सुधीनि । II. 7. 16.

² प्रथमो देव्य मिषक् । Ch. V.

³ AV, II. 9. 5. Bloomfield's Translation.

⁴ ऋग्वेदस्य उपवेदः । Carana Vyāsa by Vyāsa.

Atharvaveda before he created the animated beings. It consisted of a hundred thousand ślokas or verses, divided into a thousand chapters. But considering the short span of life and inadequate intelligence of man he recast the book into eight divisions as follows¹ :—

1. Śalya Tantra or Major Surgery : This part deals with the description and uses of the various surgical instruments and appliances, the preparation and properties of caustics and actual cautery, the methods of removing foreign substances introduced into the body from outside, as grass, wood, stones, sand, iron, earth, bones, hair, nails, or formed inside the body, as pus, blood, etc., also the foetus within the womb and the diagnosis of inflammatory swellings.²

2. Śalākya Tantra or Minor Surgery : It treats of diseases of parts of the body situated above the clavicles, such as the diseases of the eyes, nose, mouth, ears, etc., and their treatment.³

3. Kāya Cikitsā or Medicine : It deals with the inner medicine, i.e., the constitutional diseases of the body such as Fever, Diarrhoea, Hæmorrhage, Consumption, Insanity, Epilepsy, Leprosy, Urinary disorders, etc., and their cures.⁴

¹ इह खल्वयुर्वेदो नाम यदुपाङ्गमथर्ववेदस्यानुत्पाद्यं प्रजाः श्लोकस्तसहस्र-
मध्यायसहस्रं कृतवान् स्वयम् । ततोऽप्यायुष्टसूत्रमेषस्तथानलोक्तं नराणां
भूयोऽष्टधा प्रणीतवान् । तद्यथा । शल्यं शलाक्यं कायचिकित्सा भूतविद्या कीमार-
भ्युपेक्षितं रसायनतन्त्रं वाजीकरणतन्त्रमिति । S. S. I. i.

² तत्र शल्यं नाम विविधवृक्षकाष्ठपाषाणपांशुलोहलोहप्रस्थिबालनखपुषाकाशान्तर्य-
श्लेष्मद्वारार्थं वृक्षशस्त्रादिप्रविधानत्रयविनिययार्थं । Ibid.

³ शलाक्यं नाम ऊर्ध्वज्वरगतानां रोगाणां श्वेतज्वरमदनप्राणादिसंज्ञितानां
व्याधिनामुपशमनार्थम् । Ibid.

⁴ कायचिकित्सा नाम सर्वाङ्गसंज्ञितानां व्याधीनां ह्वरतिसाररक्तपित्तशोथोन्मादा-
वकारकुष्ठमृदादीनां उपशमनार्थं । Ibid.

4. Bhūta Vidyā or Demonology : It dictates the rules to be observed in performing the various religious procedures, in offering sacrifices to the gods and in conciliating the planetary influences, etc., in order to cure the mental derangements due to being possessed by a Deva, or an Asura, or a Gandharva, or a Yakṣa, or a Rākṣasa, or a Pitr (any ancestral spirit), or a Piśāca, or a Nāga.¹

5. Kaumārabhṛtya or the Science of Pædiatrics : It treats of the management of infants and advises us as to the means of rectifying the morbid conditions of milk of the wet-nurses and of curing various diseases caused by unwholesome milk and planetary influence.²

6. Agada Tantra or Toxicology : It deals with the methods of diagnosis and treatment of the poisonous bites of snakes, insects, spiders, scorpions, mice, etc., and with the means of curing patients suffering from poisoning due to an incompatible combination of food.³

7. Rasāyana or the Science of Tonics : It treats of medicines which preserve youth, prolong life, promote intelligence and strength, and give power to resist diseases.⁴

8. Vājīkaraṇa Tantra or the Science of Aphrodisiacs : It treats of remedies for increasing the quantity of semen when it is scanty, rectifying its morbid conditions, revigorating when it is wasted, regenerating its losses, and also for stimulating sexual desire.⁵

¹ भूतविद्यानाम देवासुरगन्धर्व्यक्षरक्षःपितृपिशाचनागयक्षमुपशृष्टचेतसां शक्ति-
कर्मवलिहरणादि यथोपमनार्थः । S. S. I. i

² कौमारभृत्यं नाम कुमारभरतधारीचौरदीपांशोधनार्थं दुष्टसन्ध्यहसमुत्थानाथ
व्याधौनामुपशमनार्थः । Ibid.

³ अगदतन्त्रं नाम उपकोटसूत्राद्विषकसूत्रिणादिद्विषविषव्यवहारं विविध
विषसंशोधनविधयःसोपशमनार्थः । Ibid.

⁴ रसायनतन्त्रं नाम यवःस्वापनमायुर्वेदावलोकः रसायनप्रसन्नमर्थः । Ibid.

⁵ वाजीकरणतन्त्रं नाम यवःस्वापनमायुर्वेदावलोकः रसायनप्रसन्नमर्थः । Ibid.

In the Caraka and Suśruta Samhitās, Brahmā is said to be the originator of medical science. This belief in the divine origin of medical knowledge was shared also by other nations, in ancient times. The Egyptian priests believed that Thoth was the inventor of science in general. The authorship of the oldest Egyptian works on medicine is ascribed to him. The works of Thoth were ultimately incorporated into the so-called Hermetic Books, six of which treated of medicine, anatomy and cure of diseases. The King Osiris and his son Horus, the Egyptian sun-god, are also reputed as inventors of medicine. Thoth, Osiris and Horus may be compared with Brahmā, Dakṣa and Sun (Bhāskara) as inventors of the Art of Healing. The Egyptian Thoth was known to the ancient Greeks as Hermes, and "Greek scholars trace the Greek Hermes to an Indian source, and assume the existence of two gods of the same name."¹

Le Clerk traces the origin of the science of medicine as far back as the time of Adam, the title of his fourth chapter being "Le Premier Homme a été, en certain sens, le premier Médecin." If we carry the history still further back, we are drifted on the table-land of legend—a land enveloped in impenetrable mist and darkness, a land of unrealities, like Chaos.

In Greek literature, the earliest allusion to the healing art is found in Homer, who represents it as derived from the gods. Horus was identified by the Greeks with their Apollo, and to him the discovery of the science of medicine is attributed.² The Greeks also traced the origin of the healing art to Asclepius, a deified son of Apollo.

¹ Wootton, *Chronicles of Pharmacy*, Vol. I, p. 5.

² *Inventum medicina meum est, opiferaque per orbem,
Dicor; et herbarum subjecta potentia nobis.*

Ovid.

The concurrent testimony of all the ancient nations supports the divine origin of the science. The belief is confirmed by Hippocrates (*Liber de Vet. Med.*), and by Cicero (*"Deorum immortalium inventioni consecrata est ars medica."*—*Tusc. Lib. iii.*).

Wootton quotes some passages from the *Ecclesiasticus*: "The Lord hath created medicines out of the earth and he that is wise will not abhor them, etc.," and concludes: "The idea that physicians get their skill direct from God is prominent in these passages and is perhaps truer than we are willing to admit in this age of curricula and examinations."¹

Dr. Ryan² remarks:—"All medicine is derived from God, and without his will it cannot exist or be practised. Hence the healing art, if disunited from religion, would be impious or nothing. Illness requires us to implore the Deity for assistance and relief, and humbles human pride. The seeds of the art, the wonderful cures, and the powers of remedies, are in the hand of God. He has beneficently supplied various remedies, and pronounces with our tongues, the fate, life and death, of man. Whence, we see the dignity of medicine, and what reverence is due to the Divine Author of it. Sacred history confirms this sentiment, "Every cure is from God." "The Most High created medicines out of the earth." Every thing we enjoy are the gifts of God: none but the impious ever doubted this truth; none but fools dared to deny it.

"It is recorded that Jesus, the son of Sirach, was one of the first who attributed the origin of medicine to the Deity. And we also read in Scripture, 'Honour the physician for the need thou hast of him, for the Lord hath created him.'

¹ Wootton, *Chronicles of Pharmacy*, Vol. I, p. 48.

² Dr. Ryan, *Medical Jurisprudence*, 2nd ed., 1836, pp. 3-4.

“All medicine is from God, and without him it cannot exist or prosper; our art, disunited from religion, is either impious or nothing.”¹ Such is the first precept in the moral statutes of the Italian Universities, and it is that of Roderic a Castro, in his *Medico-Politica*, and of the profession in all countries.

“The fate of the sick and the success of medicines are in the hand of the Deity: ‘in him we live, move, and have our being’; and our curative means, and our knowledge of the nature and treatment of diseases, are subservient to his divine will and pleasure.”

MSS. of *Āyurveda*:—Bik. Cat. 1382, 1383. *Āyurveda Rasāyana*: But the colophon इति हेमाद्रिकायामासुद्धरहायने, etc., proves it beyond doubt, to be a commentary by Hemādri.

References:

1. *Srśruta Samhitā*, I. i.
2. Bower MS. (where he teaches the *Aśvins* about the *Chebulic Myrobolana*).²
3. *Gada Nigraha*,³ Vol. II, p. 675, *Haritaki kalpa*.

¹ “Omnis medicina a Deo est. Coelitus delapsa non sine Dei consilio vivit agiturque. Hinc ars nostra sine religione, vel impia, vel nihil.”—*La Politica del Medico nell' esercizio dell' arte sua. Dal celebre Alessandro Knipps Macoppe, Professore di Medicina nell' J. R. Università di Padova. Milano, 1826.*

Hoernle's Ed., Ch. XI, p. 164.

² सुखोपविष्टं ब्रह्माचमन्निनी वाक्स्मृतः ।

कुतो हरीतकी जाता कतिजातिश्च कीर्यते ।

* * * * *

* * * * *

एतन्मन्त्रं यथापठं भगवन् ब्रह्ममहंसि ।

चन्द्रिनीवचनं सुता ब्रह्मा ब्रह्ममन्त्रदीप्तः ॥

4. He is also referred to in the *Brahma Vaivarta Purāṇa*¹ as the originator of the medical science from the four Vedas.

अथैतान् सामाद्यक्षाणाम् इष्टां विद्वान् प्रजापतिः ।

विचित्रं तेषामग्रं चैवायुर्वेदं चकार सः ॥

कृत्वा तु पञ्चमं वेदं भास्कराय ददौ विभुः ।

सततसंहितां तस्मात् भास्करश्च चकार सः ॥

भास्करश्च सन्निधेभ्य आयुर्वेदं स्वसंहिताम् ।

प्रददौ पाठयामास ते चक्रुः संहितास्ततः ॥

तेषां नामानि विदुषां तन्नाम्नि तत्कृतानि च ।

व्याधिप्रकाशबीजानि साध्वि मन्त्रो निशामय ॥

धन्वन्तरिर्हिबोदासः काशिराजोऽग्निनीसुती ।

नकुलः सङ्घदेवोऽकिंशवनी जगको वृधः ॥

जावाली आजलिः पैलः करघोऽग्रथ एव च ।

एते वेदाङ्गवेदशाः कीदृशं व्याधिनाशकाः ॥

चिकित्सातत्त्वविज्ञानं नाम तन्मं मनोहरम् ।

धन्वन्तरिश्च भगवान् चकार प्रथमे सति ॥

चिकित्सादर्शनं नाम दिव्योदासचकार सः ।

चिकित्साकौमुदीं दिव्यां काशिराजश्चकार सः ॥

चिकित्सासारतत्त्वञ्च धनञ्जयश्चिनीसुती ।

तन्मं वेद्यकसर्वस्वं नकुलश्च चकार सः ॥

चकार सङ्घदेवश्च व्याधिसिन्धुविमर्दनम् ।

ज्ञानार्थं सङ्घातम् यमराजश्चकार ह ॥

अथनी जीवदानश्च चकार भगवाद्दधिः ।

चकार जगको योनी वेद्यसर्वभक्षणम् ॥

सर्व्यसारं चन्द्रसुतो आवाहकससारकम् ।

वेदाङ्गसारं तन्मश्च चकार आजलिर्मुनिः ॥

5. Aṣṭāṅga Hṛdaya Saṁhitā, I. i.¹

6. Bhāva Prakāśa, I. i.²

7. He is also mentioned in Vraṇa Cikitsā Grantha as to have introduced, horn, leeches and sharp instruments in medical practice.³

Books :

1. Āyurveda : This has been described before.

2. Brahma Saṁhitā : Bhāva Miśra alludes to this work as being composed by Brahmā.

Formulae ascribed to Brahmā :—

Name	Book	Author
1. Sarvāṅga Sundara Rasa	R. S. S., p 109	Brahmā.
2. Vātakulāntaka Rasa	" p. 310	"
3. Caturmmukha Rasa	" p. 318	Caturmmukha
4. Āmvāta Gaja Siṁha Modaka	" p. 344	Vidhi.
5. Vijayānanda	" p. 432	Brahmā.
6. Sūtikāghna Rasa	" p. 458	"
7. Nīlkanṭha Rasa	" p. 482	"
8. Mṛtasañjivana-agada	C. D., p. 344	"
9. Vṛhat Agnimukha Cūrṇa	G. N., Vol. I, p. 82	"
10. Vṛhat Sārasvata Cūrṇa	" " p. 84	"
11. Candra Prabha Guḷikā	" " p. 119	"

पेलो निदानं करयस्तन् सर्वधरं परम् ।

इधनिर्णयतन्त्रं चकार कुम्भसम्भवः ॥

चिकित्साशास्त्रवीजानि तन्माख्यैतानि बोद्धुम् ।

अधिप्रणाश्वीजानि वलाधानकराणि च ॥

Brahma Vaivarta Purāṇa, Brahmakhaṇḍa, Ch. XVI.

¹ ब्रह्मा स्मृत्वाऽऽयुषोवेदं प्रजापतिमजियद्भुत् ।

² विधाताऽथर्वे सर्वस्वमयायुर्वेदं प्रकाशयन् ।

स्वनाम्नाऽऽहतां चक्रे लक्ष्मीकमयीमृजुम् ।

³ अङ्गं षडङ्गं रक्तं जलूकम् वादशाङ्गुलम् ।

शास्त्रमङ्गुलमविष्टं ब्रह्मणा निर्मितं पुरा ॥

Name	Book	Author
12. Sāyambhuva Guggula	G. N., Vol. I, p. 129	Sāyambhuva.
13. Mācikāśaṣṭakam	" " p. 177	Brahma
14. Daśasāra Sarpi	Vaidya Grantha, GOML, 13220	"
15. Karpāśmṛta Taila	Rasa Saṅketa Kalkā, p. 30	"
16. Sahacara Oil	Bower MS., p. 109	Sāyambhuva.

1. SARVĀṄGA SUNDARA RASA.

सर्वङ्गसुन्दरो रसः ।

गुह्यसूतञ्च गन्धञ्च विषञ्च जयपालकं ।
 कटुतयञ्च त्रिफला टङ्गञ्चच समाश्रितं ॥
 अस्य भावा प्रयोक्तव्या गुह्याचयसमाततः ।
 सर्वेषु ज्वररोगेषु सामवाते विशेषतः ॥
 नाशयेत् आसकासञ्च अग्निमान्द्यं विशेषतः ।
 ब्रह्मणा निर्मितः पूर्व्वं रसः सर्वङ्गसुन्दरः ॥

2. VĀTAKULĀNTAKA.

वातकुलान्तकः ।

स्रगनाभिः शिवा नागकेशरं कलिहञ्जं ।
 पारदं गन्धकं जातीफलमेला लवङ्गकं ।
 प्रत्येकं कार्ष्णिकञ्चैव स्रष्टुचूर्णानि कारयेत् ।
 जलेन मर्दयित्वा तु वटीं कुर्याद्विरक्तिकां ।
 यथा व्याध्यनुपानेन योजयेच्च चिकित्सकः ।
 अपचारी महाघोरे मूर्च्छारोगे च शस्यते ।
 वातजान् सर्वरोगाञ्च हन्यादचिरसेवनात् ।
 नातः परदारं श्रेष्ठमपचारिषु वर्त्तते ।
 ब्रह्मणा निर्मितं पूर्व्वं नाम्ना वातकुलान्तकः ॥

3. CATURMMUKHA RASA.

चतुर्मुखोरसः ।

रसगन्धकलीङ्गाश्च समं सूताङ्गि हिम च ।
 सर्व्वं खल्लतले चिन्ना कन्यास्वरसमर्द्धितं ।

एरुचपदैराविष्टा धान्यराशी दिनवयं ।
 संस्नाप्य च तदुद्धृत्य त्रिफलारससंयुतं ।
 एतद्रसायनवरं सर्वरोगेषु योजयेत् ।
 तद्व्यवाधिवलं ह्यादिहलीपलितनाशनं ।
 पीटिकं वक्ष्यमायुष्यं पुत्रप्रसवकारकं ।
 चयनीकादशविधं कारं पञ्चविधन्तथा ।
 कुष्ठमष्टादशविधं पाण्डुरोगान् प्रमिहकान् ।
 गुलं श्वासश्च हिक्काश्च मन्दाग्रिश्चाक्षपित्तकं ।
 अपचार् मज्जीग्मादं सर्वाग्नीसि त्वगामयान् ।
 क्रमेण शीलितं हन्ति हृन्मिन्द्राग्निर्यथा ।
 जगताश्च हितार्थाय चतुर्मुखमुखीदितः ।
रसचतुर्मुखी नाम चतुर्मुख इवापरः ॥

4. ĀMAVĀTA GAJA SIMHA MODAKA.

आमवातगजसिंहमोदकः ।

शुण्ठीचूर्णस्य प्रत्येकं यमान्याश्च पलाटकं ।
 जीरकस्य पलं द्वे च धन्याकश्च पलद्वयं ।
 पलैकं शतपुष्पाया लवङ्गस्य पलन्तथा ।
 टङ्गस्य पलं षष्टं मरिचस्य पलानि च ।
 विहता-त्रिफला-क्षार-पिप्पलीनां पलन्तथा ।
 शठये ला तेजपत्रश्च चविकानां पलन्तथा ।
 चथं लौहं तथ। वङ्गं प्रत्येकश्च पलं पलं ।
 एतेषां सर्वचूर्णाणां खण्डं दद्यात् शुण्ठयं ।
 हृतेन मधुना मिश्रं कर्ममावन्तु मोदकं ।
 एकैकं भक्षयेत् प्रातर्हृतश्चानुपिबेत् पयः ।
 गुल्महो रक्तपित्तज्ञश्चाक्षपित्तविनाशनः ।
 आमवातकुलभ्रं शी केशरी विधिनिर्मितः ॥

5. VIJAYĀNANDA.

विजयानन्दः ।

शुद्धसूतस्य भागेकं विभागं शुद्धतत्त्वकं ।
 वृत्तकटाङ्गान्तरैर्पूर्व्यं स्थापयेच्च समन्तकं ।
 इयोः समं पलाशस्य भव्य तस्थीपरि चिपेत् ।
 वृत्तं वृत्तकपटे सिद्धा शीघ्रयेच्च स्वरस्तपे ।
 चतुर्विंशतियामन्यु पञ्चा ब्रीतलतां नयेत् ।
 चवतार्थं काचपात्रे स्थापयेदतियवतः ।
 विधिवत् सेवितशाली इन्नि त्रिवं चिरन्तनं ।
 सर्व्वकुष्ठं निहन्त्यायु भास्करसिमिरं यथा ।
 रसोयं त्रिविधाशाय ब्रह्मणा निर्मितः पुरा ।
विजयानन्दनामायं निगूढः चितिमण्डले ॥

6. SŪTIKĀGHNA RASA.

सूतिकाघ्नोरसः ।

रसगन्धकक्षीहास्यं जातीकीर्णं सुवर्णकं ।
 समांशं मर्दयेत् खड्गे क्षालीदुग्धेन पेचयेत् ।
 गुञ्जावयप्रभासेन वटिकां कुरु यवतः ।
 प्वरातीसाररोगघ्नः सूतिकातक्तनाशनः ।
सूतिकाघ्नो रसो नाम ब्रह्मणा परिकीर्तितः ॥

7. NILKANTHA RASA.

नीलकण्ठीरसः ।

सूतकं गन्धकं लीहं विषं चित्तकपपन्नकं ।
 वराह्वरैषुकास्तुतं गन्धोद्यानावकीशरं ।
 चिकटु-निफला चैव शुक्लभक्त तथेव च ।
 एतानि समभक्तानि त्रिगुणोद्भुजं लब्धते ।

रुमई वटकं कृत्वाभक्षयेक्षणकीर्णितं ।
 कासे श्वासे चये गुणैः प्रसेहे विषमञ्जरे ।
 हृत्कायां यक्ष्णीदोषे शोथे पाण्डुमये तथा ।
 सूचकृच्छ्रे मूढगर्भे वातरोगे च दारुणे ।
नीलकण्ठो रसो नाम ब्रह्मणा निर्मितः पुरा ।
अनुपानविशेषेण सर्वरोगहरो भवेत् ॥

8. METASANJIVANA AGADA.

मृतसञ्जीवनोऽगदः ।

पृक्काप्लवस्थोण्यकाक्षीशैलेयरोचनातगरम् ।
 ध्यामकं कुङ्कुमं मांसी सुरसागैलालकृष्टघ्नम् ॥
 वृद्धतीक्ष्णीषपुष्प-श्रीवेष्टकपद्मचारटीविशालाः ।
 सुरदारुपद्मकेशर-शावरकमनःशिलाकौन्त्यः ॥
 जात्यर्कपुष्पसर्पप-रजनीहयहृद्गुपिप्पलीलाक्षाः ।
 जलमुद्गपर्णीमधुकमदनकफलसिन्धुवाराय ॥
 सम्पाकलोध्रमयूरकगन्धफलीनाकुलीविङ्गङ्गाश्च ।
 पूथेणोद्धृत्य समं पिष्ट्वा गुडिका विधेयाः स्युः ॥
 जन्तुविषघ्नो जयकृद विषमृतसञ्जीवनो ज्वरनिहन्ता ।
 घ्रेयविलिपनधारणधूमयक्ष्णैर्गृह्यस्थश्च ॥
 भूतविजयस्त्वलक्ष्मीकार्कश्यमन्त्राग्राश्रन्यरीन् हन्यात् ।
 दुःस्वप्नस्त्रीदोषानकालमरणान्मृचौरभयं ॥
 धनधान्यकार्यसिद्धि-श्रीपुष्ट्यायुर्विवर्धनी धन्यः ।
मृतसञ्जीवन एष प्रागमृताद्ब्रह्मणाभिहितः ॥

9. VRHAT AGNIMUKHA CURNA.

वृहदग्निमुखं चूर्णम् ।

श्री चारौ चित्रकं पाठा विङ्गङ्गं लवणानि च ।
 मूषेला तमरं भागीं कारवीं हृद्गुं पौष्करम् ॥

सटी दावीं विहङ्गमुखा वचा चन्द्रयवास्तथा ।
 धात्रीजीरकहृषाक्षत्रेयस्यः सोपकुक्षिकाः ॥
 चक्रवेतसमक्षीका दाङ्गिमं सकटुत्रयम् ।
 भङ्गातकाजमोदं च यवान्नी सुरदाह च ॥
 अभयाऽतिविषा चव्या हृषुवारम्बधस्तथा ।
 तिलमुक्ककशिशूणां कीकिलाक्षपलाशयोः ॥
 चाराण्यमूनि तुल्यानि सूक्ष्मचूर्णानि कारयेत् ।
 लोहकिङ्कं च सप्ताहं तप्तं गोमूत्रसेवितम् ॥
 विद्वान्सुभावितं कृत्वा योगेऽस्त्रिगप्रक्षिपेत्ततः ।
 मातुलुङ्गरसेनैव भावयेत्तु दिनत्रयम् ॥
 दिनत्रयं तु युक्तेन तथाऽऽर्द्रकरसेन च ।
 सुभावितं ततः कृत्वा भक्तमध्ये प्रयोजयेत् ॥
 एषोऽग्निकल्पचूर्णंस्तु नाशयत्यचिराद्भदान् ।
 अजीर्णकं तथाऽऽनाहं पञ्च गुल्यान् सुदुस्तरान् ॥
 गृह्णीपाण्डुरोगांश्च श्वासकासांश्च दाहणान् ।
 अपक्वारं तथोग्नादं विध्वंसं च मदाल्ययम् ॥
 प्रणुदत्युल्लङ्घनेताम्रष्टमग्निं च दीपयेत् ।
 समस्तव्यञ्जनोपेतं भक्तं कृत्वा तु भोजने ॥
 प्रदद्यादस्य चूर्णंश्च विङ्गालपदकं भिषक् ।
 ततस्तद्भवतां याति कीर्णत्वं च प्रपद्यते ॥
 एतदग्निमुखं चूर्णं चूर्णराजो निगद्यते ।
ब्रह्मणा निर्मितं च तदग्निभ्यां परिकीर्तितम् ॥

10. VRHAT SĀRASVAT CŪRNA.

वृहदसारस्वतं चूर्णम् ।

कुष्ठात्रगन्धे खवन्नाजमोदं च जीरकी वीचि कटुनि पाठा ।
 माकण्ड्यपुष्पी च समानि चूर्णं कृत्वा तु चूर्णेन बभोद्वेन ॥
 तुल्येन युक्तं बहुशी रसेन तन्नावितं ब्रह्मविनिर्जितायाः ।
 सपिमंघुभ्यां च ततोऽचमानं लिङ्गाग्रः सप्तदिनं हिताशी ।

सौख्यमिच्छन्मनसश्च धैर्यं मिधा तथैच्छन्निगुणं च कालम् ।

पठेन्नरः श्लोकसङ्ख्यमज्ञा तद्वत्प्रयुक्तं निगुणं च कालम् ॥

सारस्वतमिदं चूर्णं ब्रह्मणा निर्मितं स्वयम् ।

जगद्धितार्थं लोकाणां दुर्मेधसां विचेतसाम् ॥

11. CANDRAPRABHĀ GUṬIKĀ.

चन्द्रप्रभा गुटिका ।

कौटिल्लभकश्चाप्रिमागधिजटाशुक्ताशठीताप्यकं

भूमिन्ममिफलासुराङ्गचविकाव्योषं वचा धान्यकम् ।

रात्रौयुष्मविषामिहल्लिलवचं चारचिजातान्वितं

कर्षं कर्षमतः पुराहृश्यपलं शैलेयकाष्टान्वितम् ॥

लोहाक्षतं सिताचतुष्पलयुतं स्वाधंशिकायाः पलं

इत्यर्शांसि षडेव गुल्ममजयं श्रोषं चयं कामलाम् ।

नाडीमर्मगदाक्षलोदरकजी दीर्घज्वरान्विद्रधीम्

यक्षाणं सभगन्दरं कफमक्ष्पितोद्भवं पाण्डुताम् ॥

तं तं व्याधिसमूहशुक्रविक्रमतीभ्यश्चार्बुदशीपदान्

मेहान्श्च क्षविनाशमश्मरिश्चजस्त्वन्वांश्च देहस्थितान् ।

व्याधीन्हन्ति हृदानमेन विधिना चन्द्रप्रभा सेविता

मन्दाग्नेः परमं प्रदीपनमियं कुर्याज्जरां जर्जराम् ॥

स्नेहोष्णहारविधौ च पानविषये शीतातपे मेधुने ।

शुक्तं नास्ति विरोधितं च सततं प्रोक्ता पुरा ब्रह्मणा ॥

12. SĀYAMBHUVA GUGGULA.

सायम्भुवी गुग्गुलुः ।

श्चिरीया पञ्चपलं तावन्निरिजश्च गुग्गुलोर्द्वयं च ।

ताप्यस्व पलमितयं चे लोहाङ्गवचिकायाश्च ॥

मिफलाकरञ्जपञ्चवल्गदिरगुग्गुचौबचाविहङ्गजी-

मुक्ताविहङ्गरजनीकतुलस्यवक्रिण्डनैश्च ॥

पक्षिकेषु चर्मितान्मेषु नवां पिवन्तः प्रातः ।
 कुठौ वृत्तमधुमित्रं जयत्यस्यवातमचिरम् ॥
 त्रिदाचि कुष्ठकौठी विषगरकुलीद्वर्जितां च
 उन्नादभगन्दरमपच्यति शीपदक्षिणासां ॥
 जयति वलीपक्षितानि च योगः स्नायन्मुनः प्रीतः ॥

13. MĀCIKĀSAVA.

माचिकासवः ।

माचिकायाः शतार्धं तु द्रोणेऽर्पां च विपाचयेत् ।
 चतुर्थश्रेषि तस्मिन्सु पूते शीते प्रदापयेत् ॥
 गुडस्य त्रिशतं कृत्वा तत्तुल्यं वृत्तभाजने ।
 विद्वङ्गपिप्पलीकृष्णात्मगोलापमकेशरैः ॥
 मरिचैश्च तथा चूर्णं सम्यक्कृत्वा विचक्षणैः ।
 क्षिपेच्च पालिकैर्मर्मागैश्चैवैर्धृतिशैः समन्ततः ॥
 ततो यथावत् पीत्वा कासश्चासन्नामयान् ।
 हन्ति यस्माच्चमस्युसुरः सन्धानकारकः ॥
 माचिकासव इत्येव ब्रह्मणा निर्मितः पुरा ।

14. DASASĀRA SARPI.

दशसार सर्पिः ।

वाशागलूचीनिर्गुल्ली वृद्धतीक्ष्णभङ्गराट् ।
 कासमर्दोऽपि भूनिम्बावर्षाभूवज्रवह्निका ॥
 समूलपत्रं निष्पीड्य कुङ्कुवेन प्रथक् प्रथक् ।
 वृत्तानामेव तुल्येन समानानिव पादयेत् ॥
 कासान् पचयिष्यान् * * * यानि कदम्बतुः ।
 दशसारनिर्दं सर्पिः ब्रह्मणा निर्मितं पुरा ॥

15. KARNĀMṬĀ OIL.

कर्णाढ्यतं तैलम् ।

रामठं निम्बपत्राणि फेनः सागरसम्भवः ।

एतानि समभागानि तद्द्वयेयं सितं विषम् ॥

गोमूत्रेण समायुक्तम् कटुतैलं विपाचितम् ।

तेनैव पूरयेत्कर्णं मरकुञ्जरवाजिनाम् ॥

कर्णरोगं निहन्त्यायुः क्षेपनाच्छिरसो गदान् ।

नाम्ना कर्णाढ्यतं तैलं ब्रह्मणा निर्मितं स्वयम् ॥

16. SAHACARA OIL.

सहचर तैलम् ।

The authorship of this formula is also attributed to Bhela. For a description of the preparation, see the formulæ ascribed to Bhela.

Disciples of Brahmā : According to Suśruta,¹ Brahmā is said to have first instructed Prajāpati Dakṣa in the science of medicine. The Aśvin twins learned it from Dakṣa. They communicated the knowledge to Indra, who in his turn, promulgated the science to Dhanvantari. He appeared on the earth as Divodāsa Dhanvantari, King of Benares, and taught Suśruta and others the science and art of surgery as well as the other branches of the medical science.

Caraka,² however, on the authority of Agniveśa as instructed by Punarvvasu Ātreya, mentions Bharadvāja, as the disciple of Indra. He taught Punarvvasu and other sages. Punarvvasu Ātreya imparted his knowledge to his

¹ Suśruta Saṁhitā, I. i.

² Caraka Saṁhitā, I. i.

six students, Agniveśa, Bhela, Jatukarna, Parāśara, Hārta and Kṣārāpāni. Caraka redacted Agniveśa's work, and Dṛḍlavala supplied the last forty-four chapters and edited the entire compendium. •

In the *Brahma Vaivarta Purāṇa*,¹ Brahmā is said to have given the Āyurveda to Bhāskara (the sun-god) who is represented as the fountain of all medical knowledge. Dhanvantari, Divodāsa, the Asvin-pair and others learned the science from Bhāskara, and composed original treatises on medicine.

Āggbhāṭa II² is of opinion that the sons of Atri and other sages learned the science of medicine from Indra. Arunadatta³ in his commentary mentions Ātreya, Dhanvantari, Nimi, Kāśyapa, as disciples of Indra. Ātreya's students were Agniveśa and his colleagues.

Phāvamīśra⁴ describes Indra as the preceptor of Ātreya, Bharadvāja and Dhanvantari. Ātreya was the teacher of Agniveśa and five other sages. Dhanvantari taught it Suśruta and his companions. Caraka is described by him as an incarnation of Anantadeva, the serpent-god, who is said to have acted as the custodian of the Vedas and the Āyurveda when Nārāyaṇa rescued the Vedas in his fish incarnation.

¹ See foot-note 3, p. 6.

² *Aṣṭāṅga Hṛdaya Saṁhitā*, I. i.

अत्रिपुत्र आवेय आदित्येण धन्वन्तरिनिमिकाश्रयपादीनां त एवं ते आनिवाहयोरुचि-
वेद्यादि ज्ञानमियच्छन् ।

Sarvāṅga Sundara, I. i.

⁴ *Bhāva Prakāśa*, I. i.

VIṢṆU

In the R̥gveda, Viṣṇu is described as striding through the seven regions of the universe in three steps¹—a legend which the Pauranic authors dilated upon and which culminated into the story of “Vāmana Avatāra” or the Dwarf Incarnation of Viṣṇu and Vali. Rājā. Yāska² and his commentator Durgācāryya³ identify him with the Sun-god. Max Müller adopts their views and remarks : “The stepping of Vishnu is emblematic of the rising, the culminating, and setting of the sun.”⁴ In the Mahābhārata and the Purāṇas, he is the second member of the Hindu triad and is known as “the Preserver.”⁵

- १ अतो देवा अवंतु नो यतो विष्णुर्विचक्रमे ।
 पृथिव्याः सप्त धामभिः ॥१६॥
 इदं विष्णुर्विचक्रमे वेधा निदधे पदं ।
 समूल्हमस्य पांसुरे ॥१७॥
 वीणि पदा विचक्रमे विष्णुर्गोपा अदाभ्यः ।
 अतो चर्माणि धारयन् ॥१८॥

R̥gveda, I. xxii.

* यदिदं किञ्च तद्विक्रमते विष्णुः । विधा निधत्ते पदं । वेधा भावाय पृथिव्यां
 अन्तरिक्षे दिवि इति शाकपूणिः । समारोहणे विष्णु पदे गयशिरसि इति श्रीचक्षुः ।

Nirukta, 12. 19.

१ विष्णुरादित्यः । कथमिति यत आह वेधा निदधे पदं निधत्ते पदं निधानं
 पदेः । क तत् तावत् । पृथिव्यां अन्तरिक्षे दिवि इति शाकपूणिः । पार्थिवोऽग्निर्मेत्वा
 पृथिव्यां यत्किञ्चिदस्ति तद्विक्रमते तदधिष्ठति । अन्तरिक्षे वैद्युतात्मना । दिवि
 सूर्यात्मना यदुक्तं तन्मू अक्षिखण वेधा भवे कमिति । समारोहणे उदयगिरी उदयन्
 पदमेकं निधत्ते । विष्णु पदे मध्यन्दिनेऽन्तरिक्षे । गयशिरस्यन्तं गिरौ इति श्रीचक्षुः
 आचार्य्यो मन्वते ।

Durgācāryya.

Translation of the R̥gveda, Vol. I, p. 117. (1869)

१ सृष्टिस्थित्यन्तकरणात् ब्रह्माविष्णुशिवामिका ।

स संज्ञां याति भगवान् एक एव जगद्गणः ॥

He is a popular deity, and his worshippers recognise in him the Supreme Being. His wife is *Lakṣmī*, the goddess of fortune; his heaven is *Vaikuṇṭha*, and his vehicle is the fabulous bird *Garuḍa*. He has thousand names of which *Nārāyaṇa* (*lil.*—moving in water) is the most common. It is said that all kinds of fever are cured when prayer is offered to him by the recital of his thousand names.¹

He is referred to in the Bower MS., as the deviser of the *Siddhārtha* (or efficacious) oil.² The formula occurs both in the *Vaṅgasena* and the *Cakradatta* under the name of *Nārāyaṇa*. In the *Tattva Candrikā*, *Sivadāsa* explains the name as derived either from its author, *Viṣṇu* or *Nārāyaṇa*, or from the principal drug '*Satāvarī*' which has a synonym *Nārāyaṇī*.³ The formula has however a distinct name *Siddhārtha*, and it is elsewhere ascribed to *Viṣṇu*.

Formulae ascribed to *Viṣṇu* :—

Names.	Authors.	Books.
1. <i>Nārāyaṇa Taila</i> <i>Siddhārtha Taila</i>	<i>Nārāyaṇa</i>	<i>C. D.</i> , xxii. p. 135. <i>Śataśloki</i> , p. 48. <i>Sāraṅgadharma</i> , p. 161. <i>Bower MS.</i> , p. 188.
2. <i>Satāvarī Taila</i>	<i>Viṣṇu</i>	<i>G. N.</i> , Vol. I, p. 38.

ब्रह्मले सृजते चैव विष्णुले पाति नित्यशः ।

वदन्ते चैव संहर्ता एको देवस्त्रिधा स्थितः ॥

Agni Purāṇa, *Svarganūśāna Chapter*.

¹ विष्णुं सहस्रमूर्धनं चराचरपतिं विभुम् ।

सर्वम् नामसङ्ख्ये च ज्वरान् सर्वान् व्यपीडति ॥

Oakradatta, I. v. 183.

Gada Nigraha.

² *Bower MS.*, p. 188.

³ नारायण संज्ञा चास्य विष्णुविहितत्वात्, शतावरी रश्मि साधितालोका ।

Tattva Candrikā, Vāṭavyādhi Cikitsā.

Names.	Authors.	Books.
3. Svalpa Nārāyaṇa Taila	Viṣṇu	V. S. XXIV. vv. 21 3-292, p. 373.
„ Viṣṇu Taila	„	Bhaiṣajyaratnāvalī. V. S. XXIV. vv. 21 8-275, p. 371.
4. Madhyama Nārāyaṇa Taila	„	V. S. XXIV. vv. 21 3-302, p. 374.
„	„	C. D., XXII. 66, 1. 135.
5. Mahā	„	V. S. XXIV. vv. 31 3-315., p. 375.
„	„	C. D., XXII. 67, 1. 135.
„	„	V. K. V., p. 213.
Vṛhat Viṣṇu Taila	„	Bhaiṣajyaratnāva i.
6. Viṣṇu Taila	„	V. S. XXIV. vv. 2 8-275, p. 371.
„	„	C. D., XXII. v. 78 p. 134
7. Vṛhat Śrīgāra Abhra	„	R. S. S., pp. 290, 384.
8. Nityodaya Rasa	„	„ p. 291.
9. Āmavātesvara	„	„ p. 342.
10. Sarvāṅga Sundara Rasa	„	„ p. 351.

1. NĀRĀYAṆA TAILA.

नारायणतैलम् ।

वित्ताग्रिमस्यः श्योषाकः पाटलः पारिभद्रकः ।

प्रसारणश्चगन्धा च बृहती कष्टकारिका ॥

बला चातिबला चैव शर्दङ्गा सपुनर्नवा ।

एषां दशफलान् भागांश्चतुर्द्विंशिभ्यः पञ्चत् ॥

पादशेषं परिस्त्राय तैलपात्रं प्रदापयेत् ।

शतपुष्पा देवदाक मांसी शैल्यकां वचा ॥

चन्दनं तगरं कुष्ठमिला पर्षोचतुष्टयम् ।

राक्षा तुरगगन्धा च सैन्धवं सपुनर्नवम् ॥

एषां विपलिकान् भागान् पेषयित्वा विमिश्रयेत् ।

शताम्बरीरसश्चैव तैलतुल्यं प्रदापयेत् ॥

आर्जं वा यदि वा गव्यं क्षीरं दत्त्वा चतुर्गुणम् ।
 पाने वसौ तथाभ्यङ्गे भोज्ये चैव प्रशस्यते ॥
 अश्वो वा वातसंभघ्नो गजो वा यदि वा मरः ।
 पङ्कजः पीठसर्पी च तैलेनानेन सिध्यति ॥
 अधोभागे च ये वाताः शिरोमध्यगताश्च ये ।
 दन्तशूलैः कृन्तुस्तम्भे मन्थास्तम्भे गलयन्ते ॥
 यस्य श्रुष्यति चैकाङ्गं गतिर्यस्य च विह्वला ।
 क्षीणेन्द्रिया नष्टशक्ता ज्वरक्षीणाश्च ये मराः ॥
 बधिरा लङ्घजिह्वाश्च मन्दमेधस एव च ।
 अल्पप्रजा च या नारी या च गर्भं न विन्दति ॥
 वातार्त्तो वृषणी धेपामन्वहृदिश्च दारुणा ।
एतत् तैलवरं तेषां नास्ति नारायणं स्मृतम् ॥
 तगरं नतमच स्यादभावे शिथिलिकोपडः ॥

2. SHATAVARĪ TAILA.

शतावरीतैलम् ।

शतावरीरसप्रस्थं क्षीरप्रस्थं तथैव च ॥
 शतपुष्पा देवदारु माक्षी शैलेयकं बला ।
 चन्दनं तगरं कुष्ठं चला सांश्रुमती तथा ॥
 एतेः कर्षसमैर्भागैस्तैलप्रस्थं विपाचयेत् ।
 कुष्ठवाक्त्रनपङ्कजा अधिरव्यङ्गकुष्ठिनाम् ॥
 वायुना भग्नदेहानां येऽवस्येदन्ति मेघुने ।
 जराजर्जरदेहानां बध्मर्तिसुखशीबिणाम् ॥
 त्वग्गताश्चापि ये वाताः सिराक्कायुगताश्च ये ।
 सर्वास्माद्वाशयन्त्याश्च तैलं नास्ति संशयः ॥
नारायणमिदं नाम्ना विष्णुना समुदाहृतम् ।
 दशाङ्गमिति विख्यातं न कचिन्नतिहिन्यते ॥

3. SVALPA VIṢṆU TAILA.

सत्यविष्णुतैलम् ।

बालपर्णौपुत्रिपर्णौबलागोरक्षतखुलाः ।
 एरुख्यस्य च मूलानि हृह्योः प्रतिकस्य च ॥
 शतावरी सहचरं पचेद्वैतैः पलोन्मिदैः ।
 तैलं प्रस्थं पयो दत्वा गव्यं वाजं चतुर्गुणं ॥
 अथ तैलस्य पक्वस्य ग्रणं वीर्यमतः परं ।
 वातार्ता मरणागोच पीत्वा हृदतनुत्वचः ॥
 हृत्पार्श्वशूलं वाताक्षे गलगण्डेऽर्हि तेचये ।
 शकं राग्रमरिपाख्युत्कामलाह्वायमेदके ॥
 क्षीणिन्द्रियेऽन्महद्वा च जराजर्जरिते हितं ।
 स्त्रीषामश्वतरीणाञ्च गर्भस्थितिकरं परं ॥
 एतदङ्गवत् तैलं विष्णुना परिकीर्तितम् ।

4. MADHYAMA NĀRĀYAṆA TAILA.

मध्यमनारायणतैलम् ।

This is the popular name of Nārāyaṇa Taila. An English translation of the formula is given in Dutt's *Materia Medica of the Hindus*, p. 261.

5. MAHĀ NĀRĀYAṆA TAILA.

महानारायणतैलम् ।

शतावरी चांशुमती पृत्रिपर्णौ शटी वला ।
 एरुख्यस्य च मूलानि हृह्योः प्रतिकस्य च ॥
 मवेधुकस्य मूलानि तथा सहचरस्य च ।
 एषा दशपलान् भागान् जलद्वीये विपाचयेत् ॥
 पादावक्षिणे पूते च गर्भस्थेनं समावपेत् ।
 पुनर्नैवा वक्ष्ये दाहः शताह्वा चन्दनामुह ॥

श्रेणीयं तगरं कृष्टमेका मांसी खिरा बला ।
 अत्राह्ना सेन्धवं राष्ठा पलातानि च पेषयेत् ॥
 गव्याजपयसीः प्रस्थी ही दावव प्रदापयेत् ।
 शतावरीरसप्रस्थं तैलप्रस्थं विपाचयेत् ॥
 अथ तैलस्य सिद्धस्य श्रेष्ठं बीर्यमतः परम् ।
 अन्नानां वातभग्नानां कृष्टराणां नृणां तथा ।
 तैलमेतत् प्रदातव्यं सर्व्ववातनिवारणम् ॥
 आयुष्मांश्च नरः पीत्वा निश्चयेन हृदो भवेत् ।
 गर्भमश्वतरी विन्द्यात् किं पुनर्मागुबी तथा ॥
 नृच्छूलं पार्श्वशूलञ्च तथेवाह्वावमेदकम् ।
 अपर्ची गन्धमालाञ्च वातरक्षां हनुगहम् ।
 कामलां पाण्डुरोगञ्च अश्वरौचापि नाशयेत् ॥
 तैलमेतदभगवता विष्णुना परिकीर्तितम् ।
 नारायणमिति ख्यातं वातात्मकरणं परम् ॥

VRHAT VISNU TAILA.

बृहद्विष्णुतैलम् ।

जलधरमश्वगन्धाजीवकर्बभकी शटी ।
 काकोली खीरकाकोली जीवन्ती मधुयष्टिका ॥
 मधूरिका देवदारु पद्मकाष्ठञ्च सेन्धवं ।
 मांसी चैला त्वचं कृष्टं रक्तचन्दनशैलजं ॥
 मञ्जिष्ठा खगनाभिश्च श्वेतचन्दनकुङ्कुमं ।
 पर्षी कुन्दुर खोटिश्च यन्त्रिकञ्च मखी तथा ॥
 एतेषां पालिकेर्भागैस्तेष्वपि तथादकं ।
 शतावरीरससमं दुग्धञ्चापि समंभवेत् ॥
 विष्णुतैलवरं श्रेष्ठं सर्व्ववातविकारनुत् ॥
 ऊर्ध्ववाते क्षयीवाते अत्रविग्रह एव च ॥
 श्विरोमध्यगता यी च मन्वास्तभे मलयङ्गे ।
 यस्य शुष्यति चैकाङ्गं गतिर्यस्य च विज्ञेया ॥

चे वातप्रभवारीगा चे च पित्तसमुद्भवाः ।

सर्व्वास्ताम्राशयव्याशु सूर्यस्तम इवोदितः ॥

6. VIṢṆU TAILA.

विष्णुतैलम् ।

शालपर्णी पृश्निपर्णी वला च बहुपुटिका ।

एरण्डस्य च मूलानि वृहत्पत्र्योः पृतिव्यस्य च ॥

गवेषुकस्य मूलानि तथा सहचरस्य च ।

एषान् पलिकैः कल्कैस्तैलप्रस्थं विभाचयेत् ॥

आजं वा यदि वा गव्यं चीरं दद्याच्चतुर्गुणम् ।

अस्य तैलस्य पक्वस्य शृणु वीर्यमतः परम् ॥

अश्वानां वातभयानां कुक्षराणां तथा दृणाम् ।

तैलमेतत् प्रयोक्तव्यं सर्व्वव्याधिनिवारणम् ॥

आयुष्मांश्च नरः पीत्वा निश्चयेन हृत्ो भवेत् ।

गर्भमश्वतरी विन्द्यात् किं पुनर्मानुषो तथा ॥

हृच्छूलं पार्श्वशूलञ्च तथैवाङ्गोवभेद नम् ।

कामला-पाण्डुरोगघ्नं शर्कराश्वरी-शनम् ॥

चीलेन्द्रिया नष्टशुक्रा जरया जर्जरौकताः ।

शेषाश्चैव क्षयो व्याधिरन्वहृदिस्य दाहका ॥

अर्द्रितं गलगण्डञ्च वातशोणितमेव च ।

स्त्रियो या न प्रसूयन्ते तासाञ्चैव प्रयोजयेत् ॥

एतदङ्ग वरं तैलं विष्णुना परिकीर्तितम् ॥

7. VRHAT ŚRĀṄĀRA ABHRA.

वृहच्छृङ्गाराभ्रम् ।

पारदं गन्धकश्चैव टङ्गणं नामकेशरं ।

कपूरं जातिकीषञ्च लवङ्गं तेजपत्रकं ॥

एतेषां कर्षभागानि सुवर्णं तत्समं भवेत् ।

शुक्लं कृष्णभस्वर्यञ्च चतुष्कपिञ्जुभागिकं ॥

तालीशं चनकुष्ठञ्च मांसी पुण्यवराङ्गकं ।
 एलावीजं चिकटुकं त्रिफला करिपिप्पली ।
 एषां कर्षयच्चैव पिप्पलीकायभाषितं ।
 चतुर्पानं प्रयीक्तव्यं चोचं क्षौद्रसमायुतं ।
 नागारोग प्रशमनं विशेषात् कासरोगमुत् ।
 वातिकं पैत्तिकञ्चैव श्लेष्मिकं सान्निपातिकं ।
 वृश्चूलं पार्श्वगूलञ्च शिरःगूलं विशेषतः ।
 स्वरामयं चयं कुष्ठं श्लेष्माद्यं वातशीघ्रितं ।
वृश्च्यङ्गाराभ्रमां विष्णुना परिकीर्तितं ।
 रक्तपित्तञ्च कासञ्च नागयेन्नाचसंशयः ॥

8. NITYODAYA RASA.

नित्योदयरसः ।

सुशुभं पारदं गन्धं प्रत्येकं शुक्तिसन्धितं ।
 ततः कज्जलिकां कृत्वा मर्द्दयच्च पृथक् पृथक् ॥
 विल्लाप्तिमन्थश्शोनाकं काश्मरीपाटला वला ।
 सुप्तं पुनर्नवा धात्री वृद्धती वृषपत्रकं ।
 विदारो बहुपुत्री च एषां कषैरसैर्भिषक् ।
 सुवर्णं रजतं ताप्यं प्रत्येकं शाणमात्रकं ।
 पलमात्रन्तु कृष्णाधं तदर्धन्तु शिलाह्वकं ।
 जातीकीषफलं मांसी तालीशैला लवङ्गकं ।
 प्रत्येकं कौलमात्रन्तु वासानीरैर्भिर्मर्द्दयेत् ।
 श्लेष्मयित्वातपे पश्चात् विदार्याः पेययेद्रसैः ।
 विगुञ्जां वटिकां कृत्वा पिप्पलीमधुना भजेत् ।
नाम्ना नित्योदयस्यैव रसो विष्णुविनिर्मितः ।
 पञ्चकासान् नितन्याश्च चिरकालोद्भवानपि ।
 राजयक्षाणामपुत्रां और्षज्वरमरोचकं ।
 धातुस्यं विषमाख्यञ्च तृतीयकचतुर्थकं ।

अशीसि कामकां पाण्डुमग्निमान्धं प्रमेहकं ।

सेवनादस्य कन्दर्परूपोभवति मानवः ॥

9. ĀMAVĀTESŪVARA RASA.

आमवातेश्वरोरसः ।

शुद्धगन्धं पलाहंश्च सूतताम्रश्च तत्समं ।

ताम्राहं पारदं शुद्धं रसतुल्यं मृतायसं ।

सर्वं पञ्चाङ्गुलैरेव भावयेत् पुनः पुनः ।

संचूर्ण्य पञ्चकोलोत्थैः काथैः सर्वं विभावयेत् ।

रीद्रे विंशतिवारांश्च गुडूचीनां रसेर्दृश ।

भट्टटङ्गणचूर्णेन तुल्येन सह मेलयेत् ।

टङ्गणाहं विडं देयं मारिचं विडतुल्यकं ।

तिन्निङ्गीश्वारतुल्यश्च सूततुल्यश्च दलिकं ।

विकटुविफलश्चैव लवङ्गश्चाहंभागिकं ।

आमवातेश्वरो नाम विष्णुना परिकीर्तितः ।

महाग्निकारकीर्त्यं च आमवातात्तको मतः ।

स्थूलानां कर्षणः श्रेष्ठः कृशानां स्थौल्यकारकः ।

अनुपानविशेषण सर्वरोगविनाशनः ।

अनेन सदृशो नास्ति वज्रिदौप्तिकरो महान् ।

गुल्मीशो-पङ्कथीदोष-शोथ-पाण्डुरजापहः ॥

10. SARVĀṅGA SUNDARA RASA.

सर्वाङ्गसुन्दरोरसः ।

शुद्धसूतं तथा ताम्रं शिलाभाक्षिकताम्रकं ।

रजतं स्वर्णवङ्गश्च लौहमध्वं सनागरं ।

चूर्णयेत् पञ्चलवचं देयं सर्वन्तु तुल्यकं ।

गन्धकं मिश्रयेत् सर्वं रसेरिषां विभावयेत् ।

शुद्धी-जयन्ती-विजया-महाराष्ट्रक-धुतजैः ।

सर्वाङ्गसुन्दरीनाम्ना रक्षीयं विष्णुनिर्मितः ।

खादिदेरश्चसुखीष्यां नाभमात्रं दिने दिने ॥

कफवातामयं हृत्तं चानुपानं वदाप्यहं ।

व्योषं सीवर्षलं हिङ्गुं कारकबीजसंयुतं ।

पिवेदुष्णान्मुना चानु सर्वयत्ननिष्फलानं ॥

Reference :

1. In the Bower MS.,¹ Keśava or Viṣṇu is said to have asked Dhanvantari : Is there any medicine at all capable of curing all diseases ? In response to this query, Dhanvantari declared the Doctrine of the Plumbago-Plant.

2. The god Viṣṇu is recommended to be meditated when medicine is administered to a patient.² This practice is still in vogue among the orthodox Hindus.

¹ Bower MS., p. 169.

² श्रीवैद्य विनयेविष्णु ।

SIVA

In the Purāṇas, Śiva is considered to be the first propounder of the Science of Medicine. In later treatises, he is often quoted as an authority on medical subjects, and there exist, in these books, many formulæ which are said to have been prescribed by the god. A comprehensive work on medicine called Āyurgrantha or the Book of Life is ascribed to him, and he is said to have composed the work in the Tretā Yuga.

The name of Śiva, however, does not occur in the R̥gveda, but Rudra is mentioned by name there in connection with medical topics. Tryamvaka is mentioned there once. In the Yajurveda, prayers are offered to Rudra and Tryamvaka, and in this Veda, we find the different names of Rudra cited, amongst which Śiva occurs. He is specially called on to avert diseases and pestilences. He is prayed as the kindly god who cures disease, and from him Manu got wealth and health. From such a prototype comes the healing god Śiva in later literature.

We find Rudra invoked as the bestower of wealth and long life in the hymn by Gr̥tsamedā :

“Nursed by the sanitary vegetables which are bestowed by thee, may I live a hundred years : extirpate my enemies, my exceeding sin, and my manifold infirmities.”

* * * * *

“ Let us not provoke thee, Rudra, to wrath by our (imperfect) adorations.....invigorate our sons by the medicinal plants, for I hear that thou art a chief physician.”

And in subsequent verses Rudra is again solicited to give the gift of healing herbs and those medicaments which "are the alleviative (of disease) and defence against danger." ¹

Now who is Rudra? In the R̥gveda, we find that sometimes Agni and Indra are called Rudra. In R̥gveda, i. 27, 10, (Sv., i. 15, and Nir., x. 7 and 8) we find :
जराबोध तद् * * * सोमं रुद्राय दृशीकं । Yāska comments : Agni is also called Rudra. ² Sāyaṇa also agrees with Yāska. ³

His sisters were the Ambikās (Vaj. S. 3. 57, Yv. iii. 57). In the Purāṇas, Ambikā is described as the wife of Śiva. Roth (Illus. of Nir., p. 136) refers to Rv. v. 70, 2, and Rv. viii. 26, 5, where the epithet Rudra is applied in the dual to Mitra and Varuṇa and to the Aśvins respectively. Thus we find that the Aśvins, Agni, Mitra and Varuṇa are called Rudras. He is said to be the father of the Maruts. ⁴ Pṛśni was their mother. (See Sāyaṇa's Commentary on Rv. i. 39, 4 ; i. 114, 6 ; Rv. v. 52, 16 ; 60, 5 ; vi. 66, 3.) Agni is called Rudra in Rv. ii. 1, 6, Thou art Asura Rudra, etc. ⁵ (See also Rv. iii. 2, 5 ; v. 3, 3 ; iv. 3, 1, but in .v 6. Rudra is referred to as the name of another god ; Commentary on Rv. vi. 16, 39 ; viii. 61, 3 ; S. B. i. 7, 3, 8 रुद्रोऽप्रिरिति ; 6, 1, 3, 7 ff.

We find in the Yajurveda that the various names of Rudra are described :—

Kṛibi (x. 20k.), Bhava, Rudra, Śarvva, Paśupati, Nīla-kaṇṭha, Sitikaṇṭha (xvi. 28), Kaparddī, Vyuptakeśa,

¹ Mrs. Manning. Ancient and Mediæval India, Vol. I, p. 337.

² अप्रिरपि रुद्र उच्यते । Yāska.

³ त्वम् अग्ने रुद्रो असुरो etc. Sāyaṇa.

⁴ रुद्रायः रुद्रपुत्रा महतः । Sāyaṇa.

⁵ रुद्राय कृराय अग्नये । Sāyaṇa.

Sahasrākṣa, Śatadhanvā, Girisaya, Sipibiṣṭa, Mīdhustāma, Iṣumān (xvi. 29), Śaṅkara, Śiva, Śivatara (xvi. 41). Besides these, the other names of Rudra are mentioned.

Max Müller¹ identifies Bhava with the Greek sun-god Phœbus, according to phonetic laws. Weber² thinks the original meaning of Rudra to be thunder (Root. *Ruda* to shout).

His works :

1. **Āyurgrantha** : The Book of Life. Śiva is said to have written this work in the Tretā Yugā, as the first medical work, the original source of the medical science.

2. **Rudryāmala Tantra** : Śiva is said to have composed a comprehensive book called Rudryāmala Tantra in which he propounded the use of mercury as a therapeutic agent. Many books are extant which profess to be parts of this original treatise : viz.,

(i) **Pārada kalpa** : It forms a chapter of Rudryāmala Tantra and describes the preparations and medicinal uses of mercury.

(ii) **Dhātukalpa** : It forms a chapter of Rudryāmala Tantra and treats of the therapeutic uses of metallic substances.

(iii) **Haritālakalpa** : It forms a chapter of Rudryāmala Tantra and it describes the properties and medicinal uses of yellow orpiment.

(iv) **Abhtrakalpa** : a treatise on the properties and medicinal uses of mica.

(v) **Haritakīkalpa** : It treats of the uses of myrobalan.

(vi) **Dhātukriyā** or operations with metals : It is in the shape of a dialogue between Śiva and Pārvatī. "The

¹ Max Müller : Origin and Growth of Religion (1882), p. 216.

² Weber : Indische Studien, translated in Muir's Sanskrit Texts, Vol. IV.

work cannot be placed earlier than in the sixteenth century A.D., as it contains reference to the country of the *Phirangas* and to *Rūma*, the Arabic name of Constantinople." ¹ The book is also called *Dhātumañjarī*.

3. *Kāma Tantra*: a treatise on the sexual science. A compilation from this book is called "*Mantratantra-uṣadhi*" which treats of the use of medicines prepared with the help of charms and incantations.

4. *Śaiva Siddhānta*: The work is mentioned and quoted by *Cakrapañidatta* with reference to *Śiva Guṭikā*. ²

5. *Āyurveda*:

MS: GOML. (Madras), Vol. xxiii, No. 13086.

A treatise dealing with the symptoms, the diagnosis and the treatment of diseases. "The Science of *Āyurveda* is here stated to be an appendage of the *R̥gveda* and to have been revealed by God *Parama-śiva* to Goddess *Pārvatī*."

Beginning : कैलास शिखरे रम्ये पार्वती परमेश्वरी ।

अथोन्मत्तसुखलोलायां प्रमथादिमङ्गलम् ॥

* * * *

* * * *

सर्वभूतहितं भोष्यं ऋग्वेदाङ्गं (वै)दरूपकम् ।

आयुर्वेदमिदं नाम सर्वजन्तु(न्तो)ष जीवनम् ॥

End : अथप्रकीर्णप्रश्ना बायीर्योषादिषु विषु ।

वर्षादिषु च पितृषु च सप्तः शिशिरादिषु ॥

अथैतद्यजुर्गोप्ता मध्ये मन्त्रत जायते ।

अन्ते सप्त च विज्ञेयं कोविदेः शास्त्रपारमैः ।

Colophon : इति व्याधिरूपं समाप्तम् ॥

¹ Ray, History of Hindu Chemistry, Vol. II, Ch. I, p. lxxx.

² वैद्यविद्यालोको विवागुद्धिकेयम् ।

Cakradatta, Rasāyanādhikara, p. :

Ibid: MS. No. 13087. "Similar to the above. It is written in prose in the form of sūtras. The work appears to be the same as that described on p. 63 of Dr. Burnell's Catalogue."

MS. No. 1308. Similar to the above.

6. Kailāsakāraka: MS: GOML., Vol. xxiii, No. 13113.

"On the purification of mercury and on the method of using it in medicinal preparations. In the beginning the legendary account of the origin of mercury is given. The work is in the form of a conversation between Śiva and Pārvatī."

Beginning: रसाकाराय शर्वाय नमस्तुवार्थकारिणे ।

जरामरणदारिद्र्यव्याधिदुःखापहारिणे ॥

कैलासशिखरासीनं कान(न)कन्दर्पनाशनम् ।

प्रसन्नं परमेशानं जगदानन्दकारणम् ॥

End: पञ्चधैव कषायेन पूर्वपूर्ववत्प्रदाः

* * * *

चालन्त्या दधिकालौ च योग्यं तद्वर्तिकल्पनात् ॥

Colophon: इति कैलासकारकः समाप्तः ॥

7. Vaidyārāja Tantra: MS: GOML., Vol. xxiii, No. 13226.

"This work is apparently a comprehensive medical treatise. The portion contained in this MS. gives details for feeling the pulse and is stated to have been revealed by Parama-śiva to Pārvatī."

Beginning: कैलासशिखरे रम्ये नानारत्नविभूषिते ।

नानाकल्पद्रुमाकीर्णं गुल्फसन्नाधवर्जिते ॥

End: पूर्वं पीथ (पित्त) गति प्रभञ्जनगतिश्चेत्थानमाभिप्र(विश्र)ती—

मन्यन्तममणीं सुहृदिदधतीं चक्राधिदृढाजे(श्च)वा ।

सौम्यं दधतीं कलापरहितं सुखे गतिं चाश्रुतां

नो साध्वं धमनीं वदन्ति सुखियो नाङ्गीकृतिं क्षान्तिम् ॥

Colophon : इति श्रीपावतीसंवादे वैद्यराजतन्त्रे नाङ्गीकृतं प्रथमकारणं सम्पूर्णम् ॥

References to Rudra as a physician in the Vedas :—

- | | | |
|---|---|--|
| Rv. i. 43. 2 | : | Rudra's medicines. |
| 4 | : | Rudra, the possessor of healing remedies. Prayer for health and wealth. |
| 114, 1 (Vaj. S.
16,48 ; Taitt. S.
iv. 5,10,1) | : | Prayer to Rudra for men and beasts to be prosperous and free from disease. |
| 2 | : | Prayer to obtain what health and wealth father Manu acquired. |
| 5 | : | Rudra carries in his hands the best remedies. |
| 7 | : | Prayer not to kill the old men, boys, fathers, mothers, adults, fetus, and our bodies. |
| 8 | : | Prayer not to kill our sons, grandsons and men, cows and horses. |
| ii. 33. 1 | : | May we increase in offspring, O Rudra. |
| 2 | : | Prayer for 100 years of life by Rudra's blissful medicines. Put away far from us sickness in all directions. |

- 4 : Raise up our men by thy medicines, for I hear thou art the greatest physician of physicians.
- 7 : O Rudra, where is thy softly stroking hand which cures and relieves?
- 6 : Prayer to gain the favour of Rudra who has gladdened the suppliant with more vigorous health.
- 12 : Thou wilt give us thy medicines.
- 13 : The pure medicines of Maruts, those medicines which Manu, our father, chose, those I crave from Rudra, as health and wealth.
- v. 42, 11 : Rudra commands all remedies.
- vi. 74, 2 : Prayer to Soma and Rudra to drive away diseases in every direction; and to infuse the remedies into our bodies.
- 4
- vii. 46. (Nir. x. 6),
- 2 : Prayer to Rudra to come without illness among our offspring.
- 3 : He has thousand remedies.
- 59 : Tryamvaka is mentioned.
- Yv. iii. Kandikās 57 : Tryamvaka is mentioned.
Ambikā is Rudra's sister.
- „ 58 : Rudra is called Tryamvaka.
- „ 59 : O Rudra, you are the best medicines. Prayer for Rudra's

medicines for men and animals.

- Yv. iii. Kāṇḍikās 60 : Prayer to Tryambaka to be free from birth and death.
 „ 61 : Śiva by name is mentioned. O
 „ 1-16 Rudra ! live within our body and protect it.

xvi. Śatarūdriya

(Rv. i., 114, 1 ff)

(Taitt. S. iv. 5.)

Prayer to Girīśa for good health (4) and for a first class physician, well-versed in the Vedas (5). He is prayed for not to kill foetus, boys and adults (15) and also for long life (16).

- „ 47—49 : Prayer to Śiva for recovery from diseases.

- Av. : xi. 2, 22 : Reverence to him whose consumption, whose cough, assail one like the neighing of a stallion.

- 26 : Do not assail us with consumption or poison.

References to Rudra in the R̥gveda—

- Rv. i, 27, 10 (Sv. i, 15 ; Nir. x. 8) : Rudra identified with Agni.
 39 : Maruts, the sons of Rudra.
 48 : See page 33.
 64, 2 } : Maruts, the manly youths of
 3 } Rudra.
 85, 1 : Maruts, the powerful sons of Rudra.

- 114, 1
 (Vaj. S. 16, 48 ;
 Tatt. S. iv, 5, 10,
 1.) : Kaparaddi is mentioned. Also
 see page 33.
- 122, 1. : Asura Rudra.
 129, 3. : The renowned Rudra:
 ii, 1, 6 : Agni, thou art Rudra, the
 Asura of the sky.
 33, 1—15 : Hymn by Gr̥tsamedā.
 34, 2 : Rudra, the strong man.
 38, 9 : Rudra is mentioned.
 iii, 2, 5 : Agni is called Rudra.
 iv, 3, 1 : Golden Rudra Agni.
 6 : Rudra, the destroyer of man.
 v. 3, 3 : Prayer to Agni who is invoked
 as Rudra.
 41, 2 : Rudra is mentioned.
 42, 11 : Rudra, the lord of all medicines.
 15 : Maruts, the young sons of
 Rudra.
 46, 2, (V. S.
 33, 48) : Rudra is mentioned.
 51, 13 : Prayer to Rudra to save us.
 52, 16 : Pr̥sni, the mother, and Rudra
 the father of the Maruts.
 59, 8 : Rudra's son.
 60, 5 : Rudra and Pr̥sni the parents
 of Maruts.
 70, 2 : Mitra and Varuṇa invoked as
 Rudras.
- vi, 28, 7
 (Av. iv, 21. 7) : Rudra's weapon.
 49, 10 : Rudra, the lord of the world.

- 50, 4 : Rudra's sons.
- 66, 3 : Sons of the bounteous Rudra.
- 11 : Strong and Marut-like son of Rudra.
- 74, 2 : O Soma and Rudra, draw far away in every direction the disease which has entered our house.
- 3 : O Soma and Rudra, bestow all these remedies on our bodies.
- vii, 10, 4 : Great Rudra.
- 35, 6 : May Rudra god be peaceful to us.
- 36, 5 : Rudra is bestowing rice.
- 40, 5 : Rudra bestows glory.
- 41, 1, (V.S. 34, 34 ; Av. 3, 16, 1) : We pray Soma and Rudra in the morning.
- 46, 2 : Be without illness among our people, O Rudra.
- 3 : A thousand medicines are thine.
- 56, 1 : Boys of Rudra.
- 22 (V. S. 1, 433) : Sons of Rudra.
- 58, 5 : Sons of Rudra.
- 59, 12 : Prayer to Tryambaka to be detached from death, like a gourd from its stem.
- viii, 13, 20 : Maruts, the sons of Rudra.
- 20, 3 : Sons of Rudra.
- 17 : Rudra's sons, the lords of Asuras.
- 22, 14 : The Ásvins twins are invoked as two Rudras.

- 26, 5 : O Asvins ! you are Rudra.
 29, 5 : Rudra, the pure, the terrible,
 the pleasant, and the
 possessor of medicines,
 carries sharp weapons.
 x, 64, 8 : Rudra and the Great Rudra
 among the Rudras.
 65, 1 : Rudra is mentioned.
 66, 3 : May Rudra with his sons make
 us happy.
 93, 4 : When Rudra is prayed, men
 become happy.
 7 : Vāyus, sons of Rudra.
 125, 6 (Av. 4,
 30, 5) : Rudra kills his enemies.
 169, 1 : Prayer to Rudra to protect the
 cows.

In the *R̥gveda*, medicines are described to be generally brought by Rudra, and by his sons, the *Maruts*. The following hymns refer to *Maruts* in connection with medicine :

- Rv. ii. 33, 13 : O *Maruts*, those pure medicines
 of yours.
 v. 53, 14 : You shower down health, wealth,
 water and medicine, O
 Maruts !
 viii. 20, 23 : O bounteous *Maruts*, bring us
 some of your *Marut*-medi-
 cines.
 25 : Whatever medicine there is
 on the *Sindhu*, on the
 Asikni, in the seas, on the
 mountains ;

26

: Seeing it, you carry all on your bodies. Bless us with it! Down to the earth, O Maruts, what hurts our sick one,—straighten what is crooked.

x. 77, 7

: The man who offers gifts to the Maruts, gains health and wealth, blessed with offspring.

The formulæ ascribed to Siva :—

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1. Ointāmaṇi Rasa	Bhairava	R. S. S.	125
2. Sūcikābharapa Rasa	Bhairava	"	137
3. Mṛtasafijivana Rasa	Śaṅkara	"	139
4. Ardhanārīśvara Rasa	Śambhu	"	151
5. Sarvatobhadra Rasa	Śiva	"	168
6. Cūḍāmaṇi Rasa	"	"	171
7. Vṛhat Cūḍāmaṇi Rasa	"	"	172
8. Grahaṭṭisārādīla Rasa	"	"	194
9. Vaidyanātha Vaṭi	Vaidyanātha	"	195
10. Kājavalabha Rasa	Maheśa	"	210
11. Mahārāja Nṛpatiballabha) Sarvatobhadra)	Maheśvara	"	213
12. Mahārāja Nṛpavallabha	Śambhu	"	214
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14. Vṛhat Agni Kumār Rasa	Maheśa	"	224
15. Lokeśvara Rasa	Śambhu	{ R. C. IX	267 97
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18. Viśveśvara Rasa	Viśvanātha	"	338
19. Āmavāstāri Vaṭikā	Pureśana	"	341
20. Sūlarāja Lauha	Hara	"	348
21. Vaidyanātha Vaṭi	Vaidyanātha	"	356
22. Jogeśvara Rasa	Mahādeva	"	401
23. Mahā Mṛtyunājaya Rasa	Maheśa	"	381
24. Vajrakṣara	Pinḍki	"	403

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26. Vālarasa	Śiva	"	465
27. Śrī Manmatha Rasa	Maheśa	"	469
28. Vasantatilaka Rasa	Mṛtyuñjaya	"	480
29. Makaradhvaja	Śiva	"	480
30. Mahā Nilakaṇṭha Rasa	Śambhu	"	482
31. Jāraṇa and Bhakṣaṇa of Mica and Mercury	Isvara }	R. C.	11
	Bhairava }		12
32. Cūrparśja	Rudra	"	51
33. Candraprabhā Guṭikā	Śambhu	"	86
34. Rasasārdḍūla	Giriśa	"	48
35. Śrī Kāmeśvara Modaka	Vaidyanātha	"	61
36. Śiva Guṭikā	Śiva	Śaiva Siddh-vānta, C.D.	366
37. Kravyāda Rasa	Bhairava	"	86
38. Śaṅkara Lauha	Śankara	B. P. II. ii.	292
39. Candraprabhā Vaṭī	Rudra	" II. ii.	623
40. Mahā Bhallātaka Avalaha	Mahādeva	" II. iv.	884
41. Rasālā	Makareśvara	" III.	1179
42. Siṃhanāda Guggulu	Daṇḍapāṇi	C. D.	157
43. Formula to Cure Svitra	Vaidyanātha	"	25
44. Kusumāḍya Taila	Devadeva	G. N., Vol. I.	46
45. Vṛhat Śiva Guṭikā	Giriśa	"	124
46. Vyosāḍya Guṭikā	{ Śambhu	"	
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47. Vṛhat Śāyambhuva Guggulu	"	"	135
48. Kumāryāsava	Sūlapāṇi	"	166
49. Nālikerāsava	Śambhu	"	189
50. Vṛhat Sahacara Taila	"	"	209
51. Vijayā Guṭikā	Rudra	"	232
52. Kaulitikā Vartī	Pināki	" Vol. II	454
53. Śūtabhasma	Śiva	R. P. S. III	30
54. Gandhaka Taila Pātana	Śambhu	" VI	58
55. Vātanaśana Rasa	Bhairava	" VIII	83
56. Tālakarāja Rasa	Bhairava	" "	97
57. Svarṇa Sindūra	Pināki	Sanūksipta Sāra	3
58. Pūrṇacandra Rasa	Śaṅkara	"	4
59. Bhasmeśvara	Śambhu	Vaidya Joga Sangraha GOML, 13225	

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60. Śītabhañjī Rasa	Rudra	Rasasañketa- kalikā	15
61. Putraprada Rasa	"	"	24
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1. CINTĀMAṆI RASA.

चिन्तामणिरसः ।

रसविषगन्धकटङ्गणताम्रवर्णारकं व्योषं ।
 तालकफलतयञ्च चौद्रेः शतं वारान् ।
 रंमह्यं रत्नमितवटिका कार्थ्या भिषग्भिः प्राग्नेः ।
 शुष्कीपिष्टेन सममेकां हे वाधवा तिष्ठः संप्राश्य ।
 नारिकेलजलमनुपेयं संवयेत्
 सैन्धवं जीरं तक्रपथ्यं प्रसीकृत्य ।
 प्रश्मयति सन्निपातज्वरं
 तथा जीर्णज्वरं विविधञ्च ॥
 ग्रीह्मं चापानकं काष्ठं त्रासं वज्रिमान्यञ्च ।
 चिन्तामणिरसोऽयं किल स्वयं भैरवेण निर्दिष्टः ॥

2. SUCIKĀBHARANA RASA.

सुचिकाभरणीरसः ।

रसगन्धकजानञ्च विषं स्वावरजङ्गमं ।
 मातृस्ववाराहमायुरक्षानपितैर्विभावयेत् ।
 सुचिकाभरणी नाम भैरवेण प्रकीर्तितः ।
 सुचिकादेव दातव्यः सन्निपातनिवर्द्धकः ॥

3. MṚTASĀNĪBANA RASA.

मृतसञ्जीवनीरसः ।

शुद्धसूतं विधा गन्धं खल्ले तत् कञ्जलीकृतं ।
 अथलौहकयोर्भक्ष्यताम्रभक्षसमं समं ।
 विषं तालं वराटश्च शिलाहिङ्गुलचिवकान् ।
 हस्तिगुण्डी चातिविषा तूषणं हेममालिकं ।
 चूर्णं विमर्दयेद्वावैराट्रकस्य दिनवयं ।
 निर्गुण्डीविजयाद्रावैस्त्रिदिनं मर्दयेत् पुनः ।
 काचकुण्यां निवेश्याथ बालुकायन्त्रगे पचेत् ।
 द्वियामान्ते समुज्ज्वल्य मर्दयेदाद्रकैर्द्रवैः ।
 मृतसञ्जीवनी नाम रसोऽयं शङ्करोदितः ।
 मृतोऽपि सन्निपातार्त्तो जीवत्येव न संशयः ॥

4. ARDHANĀRĪŚVARA RASA.

अर्धनारीश्वरोरसः ।

रसगन्धौ समौ शुद्धौ विषं यास्यश्च तत्समं ।
 जैपालं तत्समं ग्राह्यं मरिचश्च चतुर्गुणं ।
 विफलाया रसैर्नर्दं भावना पञ्चधा तथा ।
 जम्बीराणां द्रवैर्नैत्यमेकस्त्रिमासिकापुटे ।
 शरीराङ्गतं घोरं ज्वरं हन्ति न संशयः ।
 अर्धनारीश्वरो नाम रसः शम्भुप्रकीर्तितः ॥

5. SARVVATOBHADRA RASA.

सर्वतोभद्ररसः ।

विग्रहं गगनं ग्राह्यं द्विकर्षं शुद्धगन्धकं ।
 तीलकं तीलकाङ्गं च हिङ्गुलीत्यरसस्तथा ।
 कर्पूरं केशरं मांसी तेजपत्रं खवङ्गकं ।
 मातीकोषफलञ्चैव सूक्ष्मा करिपिप्पली ।

कुष्ठं तालीशपत्रं च धातकीबीजमुसकं ।
 हरीतकी मरिचकप्रफुल्लवेर विभीतकं ।
 पिप्पल्यामलकशैव शालभागं विचूर्णितं ।
 सर्वमेकीकृतं पिष्टा वटीं कुर्याद्विशुद्धिकां ।
 भक्षयेत् पथ्यं खण्डेन मधुना सितयापि वा ।
 रोगं ज्ञात्वानुपानञ्च प्रातः कुर्याद्विचक्षणः ।
 हन्ति मन्दानलान् सर्वाङ्गान् आमदीपं विसूचिकां ।
 पित्तघ्ने अभवं रोगं वातघ्ने अभवन्तथा ।
 आनाहं सूचकश्चसंयहयद्दृष्टीं वमिं ।
 अक्षपित्तं शीतपित्तं रक्तपित्तं विशेषतः ।
 क्षिरज्वरं पित्तभवं धातुस्थं विषमज्वरं ।
 कासं पञ्चविधं हन्ति कामलां पाण्डुमेव च ।
 सर्वलोकहितार्थाय शिवेन भाषितः पुरा ।
 सर्वतोभद्रनामायं रसः साक्षान्महेश्वरः ॥

6. CUPĀMANI RASA.

चूडामणिरसः ।

मृतं सूतं प्रवालञ्च स्वर्णं तारञ्च वङ्गकं ।
 शूलं मुक्ता तीक्ष्णमभं सर्वमेकत्र योजयेत् ।
 जलेन पिष्टा वटिका कार्थ्या वल्लप्रमासृतः ।
 धातुस्थं सन्निपातोत्थं ज्वरं विषमसम्भवं ।
 कामशोकसमुद्भूतं त्रिदोषजनितमथा ।
 कासं श्वासञ्च विविधं शूलं सर्वाङ्गसम्भवं ।
 शिरीरोगं कर्णशूलं दन्तशूलं गलगृहं ।
 वातपित्तसमुद्भूतं गृह्णीं सर्वसम्भवा ।
 आमवातं कटीशूलमग्निमान्द्यं विसूचिकां ।
 अर्शांसि कामलां मेहं सूचकश्चादिकञ्च यत् ।
 तत्सर्वं नाशयत्याद्य विषुचक्रनिवासुरान् ।
 चूडामणिरसो ह्येव शिवेन परिकीर्तितः ॥

7. VRHAT CUDĀMANĪ RASA.

वृहत् चूडामणिरसः ।

कसूरिकाविद्रुमरीप्यलीहं
 तालं द्विरण्यं रससिन्दूरश्च ।
 सुवर्णं सिन्दूरलवङ्गमौक्तिकं चोचं
 धनं माक्षिकं राजपट्टं ।
 गोक्षुरजातीफलजातीकोषं
 मरिचकपर्पूरशिखीवच्च ।
 प्रगुल्लं सर्वं हि समं प्रयत्नात्
 अथान्नगन्धा द्विगुणं हि वैद्यः ।
 वत्स्यमाषीषधैर्भाव्यं प्रत्येकं मुनिसंख्यया ।
 निर्गुण्डीफञ्जिकावासारविमूलनिकण्टकैः ।
 तद्दीर्घं कथयिष्यामि वातिकं पैत्तिकं ज्वरं ।
 कफोद्भवं द्विदोषोत्थं त्रिदोषजनितमथा ।
 सन्ततं सततं हस्ति तृतीयकचतुर्थकौ ।
 ऐकाहिकं द्वाहिकञ्चविषमं भूतसम्भवं ।
 नाशयेदक्षिरादेव हस्तमिन्द्राग्रनिर्घया ।
 चूडामणिरसो ह्येष श्रिवेन परिभाषितः ॥

8. GRAHANĪŚĀRDDŪLA RASA.

ग्रहणीशार्दूलरसः ।

रसगन्धकयोश्चापि कर्षमेकं सुशोधितं ।
 द्वयोः कञ्चलिकां कृत्वा द्वाटकं षोडशांशतः ।
 लवङ्गं निम्बपत्रञ्च जातीकोषफले तथा ।
 एतेषां कर्षचूर्णेन सूक्ष्मैर्ला सह मेलयेत् ।
 मुक्तागुह्येन संख्याप्य पुटपात्रेण साधयेत् ।
 गुग्गापत्रप्रमाणेन प्रत्यहं भक्षयेन्नरः ।
 सूतिकां ग्रहणीरोगं हरत्येव सुनिश्चितं ।

चर्मन्नी दीपनस्यैव बलपुष्टिप्रसादनः ।
कासत्रासातिसारघ्नो बलवीर्यकरः परः ।
दुष्पारं यक्ष्णीरोमचामयूलञ्च नाशयेत् ।
संसारलोकरक्षार्थं पुरा कूट्टेच भाषितः ॥

9. VAIDYANĀTHA VATĪ.

वेद्यमायवटी ।

रसस्य ग्राह्यं संगृह्यं काश्चिकेन तु शोधयेत् ।
चित्रकस्य रसेनापि त्रिफलायाश्च बुद्धिमान् ।
रसाहं गन्धकं शुद्धं भृङ्गराजरसेन वा ।
दाभ्यां संमूर्च्छं न कृत्वा खरसैः ग्राह्यसन्निभैः ।
खल्लयेन त्रिलासुखे कमशो वक्ष्यमाणजैः ।
निर्गुच्छीमधुकञ्चेताकुठेर शीघ्रमुन्दरैः ।
भृङ्गाब्दकेशराजैश्च तथा चेन्द्राशमोत्कटैः ।
सर्वपाभां वटीं कृत्वा दद्यात्तां यक्ष्णीमदे ।
सामवानेऽभिमान्ये च ज्वरे ग्रीहीदरेषु च ।
वातघ्नं पित्तकारिषु तथा श्लेष्मण्डेषु च ।
अस्त्रतक्रादिसिवाश्च कुर्वीत स्लेष्मया बहु ।
श्रीमता वेद्यनाथेन लोकानुग्रहकारिणा ।
स्वप्नान्न ब्राह्मणस्यैव भाषिता लिखितेन तु ॥

10. NṚPAVALLABHA RASA.

शृपवल्ग्वभो रसः ।

जातीफल-खड्गान्द-त्वगीला-टङ्गरामठं ।
जीरकं तेजपत्रञ्च यमानी विशसेत्स्ववं ।
लौहमधुं सताम्रञ्च रसमन्धकमेव च ।
मरिचं विट्तं रुप्यं प्रत्येकं द्विपलोष्णितं ।
धात्रीरसे वटीं कुर्यात् त्रिगुञ्जाफलमम्लम् ।
इति गुलं तथा गुल्मनाममातं सुहाय्यम् ।

हृच्छूलं पार्श्वशूलञ्च चक्षुःशूलं हृत्सीमकं ।
 शिरःशूलं कटीशूलमनाहमष्टशूलकं ।
 क्रिमि-कुष्ठानि-दद्रूनि वातरक्तं भगन्दरं ।
 उपदंशमतीसारं यक्ष्ण्यर्शःप्रवाहिकां ।
नृपवज्रभरसीयं मङ्गेश्वरं प्रकाशितः ॥

11. MAHĀRĀJA NṚPATIVALLABHA RASA.

महाराजनृपतिवज्रभरसः ।

कर्षवयं सृतं कान्तं सृताम्बं सृतताम्रकं ।
 सृतं तारं माचिकञ्च कर्षं कर्षं प्रदापयेत् ।
 सृतं स्लेष्मं सृतं तारं टङ्गणं शङ्खमेव च ।
 वसिरं दन्तिमूलञ्च मरिचं तेजपत्रकं ।
 यमानी वालकं मुक्तं शुक्लकञ्च सधान्यकं ।
 सिन्धुद्वयं सकर्पूरं विडङ्गं चित्तकं विषं ।
 पारदं गन्धकञ्चैव तोलमानं प्रदापयेत् ।
 तोलद्वयं विहृष्टं लवङ्गं तप्ततुर्गुणं ।
 जातीकोषफलञ्चैव वराङ्गकन्तु तत्समं ।
 सन्ध्वेषामर्द्धभागन्तु विडङ्गं तत्र मिश्रयेत् ।
 सन्ध्वेषीकृतं यद्वयत् तृटिचूर्णञ्च तत्समं ।
 भावना च प्रदातव्या काशीदुग्धेन समधा ।
 मातुलुङ्गरसैः पयात् भावयेत् सप्तवारकं ।
 कायाशुक्लां वटीं कृत्वा भक्षयेद्द्व्यश्रत्तिकां ।

मन्दानलं संयक्ष्णीं प्रवृज्वा-

मामानुवन्तीं क्रिमिपाक्षुरोगं ।

कृद्यक्षपित्तं हृदयामयञ्च

गुल्मीदरानाहभगन्दरञ्च ।

अर्शांसि वै पित्तकृतानशीमान्

सामं सयुक्ताष्टकमेव हन्ति ।

साजीश्वरं विदध-विसर्पदाहं

विलम्बिकाद्याम्यसं प्रमेहं ।
कुष्ठान्धशेषाणि च कासशीघ्रं
हन्वात् सशीघ्रं ज्वरमूलकम् ॥
मतान्तरि सर्व्वतोभद्रनाम
महेन्द्ररैव विभाषितोयं ॥

12. MAHĀRĀJA NṚPAVALLABHA.

महाराजशृपवज्रभः ।

मासिकं खीरमभक्ष्यं वङ्गं रजतहाटकं ।
यन्वि यमानिका चोषं तासं नागरटङ्गम् ।
सैन्धवं वालकं मुस्तं धान्यकं गन्धकं रसं ।
शङ्खी कर्पूरकश्चैव प्रत्येकं माषकोष्णितं ।
माषद्वयं रामठं स्यान्मरिचानां चतुष्टयं ।
जातीकोषं खवङ्गश्च पञ्च तोलकोष्णितं ।
नाभिश्ङ्गं विङ्गश्च शणं माषद्वयं विषं ।
कर्षण्टकं सविमाषं मूष्णेलानां ततः क्षिपेत् ।
विङ्गं कर्षण्टकं सर्व्वं छागीजीरेण पेषयेत् ।
चतुर्गुणमितं खादेत् सानाहयहर्षी जयेत् ।
शम्भूना निर्मितो ह्येष पूर्व्ववद् गुणकारकः ।
नाम्ना महाराजशृपर्व्वो शृपवज्रभ उच्यते ॥

13. PAÑCĀNANA VATĪ.

पञ्चानन वटी ।

स्रुतसुताभखीरानि स्रुताकगन्धकैः सह ।
सर्व्वरैषि समभागानि भक्ष्यान् सर्व्वतुल्यकं ।
वन्धशूरकन्दोत्प्रेदं वैः पलप्रभासतः ।
मह्येहिममैकञ्च मासमात्रं पिवेद्दृष्टैः ।
असाध्येष्वपि कर्तव्या चिकित्सा शङ्करोदित्ता ।
कुष्ठरोगं निहत्याय सत्युरीमविनाशिनौ

14. VRHAT AGNI KUMĀRA RASA.

वृहदग्निकुमारी रसः ।

ग्रहसूतं विधा गन्धं गन्धतुल्यञ्च टङ्गणं ।
 फलत्रयं यवचारं व्योषं पञ्चपटूनि च ।
 वादशैतानि सर्वाणि रसतुल्यानि दापयेत् ।
 संमर्द्दं सप्तधा सर्व्वं भावयेदाद्र्द्रकद्रवैः ।
 संशोष्य चूर्णयित्वा तु भक्षयेदाद्र्द्रकान्मुना ।
 शाकमात्रं वयो वीर्य्यं नागाजीर्णप्रशालये ।
 रससाग्निकुमारोयं मङ्ग्लेन प्रकाशितः ।
 महाप्रकारकश्चैव कालभास्करतेजसां ।
 अग्निमान्द्यभवान्नोगान् शीघ्रं पाष्कृद्भ्रमयं जयेत् ।
 दुर्गमयद्दृष्टौसामरोगान् हन्ति न संशयः ।
 यथेष्टाहारचेष्टस्य नास्त्वत्र नियमः क्वचित् ॥

15. LOKEŚVARA RASA.

लोकेश्वरीरसः ।

पलं कपर्दचूर्णस्य पलं पारदगन्धयोः ।
 माषञ्च टङ्गणसौवर्जम्बीराङ्गिर्विमर्द्दयेत् ।
 पुटेऽङ्गोलोकेश्वरीमाषा लोकनाश्वरसोत्तमः ।
 ऋते कुष्ठं रक्तपित्तजन्यान् रोगान् वलादृजयेत् ।
 पुष्टं वीर्य्यं प्रसादीजः कान्तिलावण्यदः परः ।
 कोऽस्ति लोकेश्वरादन्वो वृषां शम्भुमुखोद्भूतः ।
 पथ्यं शाल्योदनं सर्पिर्दधिशाकं सङ्गिद्भुजं ।
 नित्यं यामहयादूर्ध्वं कार्य्यं वारत्रयं दिवा ।
 चण्डान्नोऽरुचिमान्ते वा लघ्नः सूतो न चेत् पुनः ।
 अष्टमेऽङ्गि प्रदातव्यः पूर्व्ववत् कार्य्यसिद्धये ।
 प्रश्ने सप्तमे दीया लावण्यरसमुद्भवाः ।
 द्वितीये माषयोधूमं भक्ष्यं पूर्व्वोदितञ्च यत् ।

देयानि मन्त्रमांसानि तृतीये मर्दनादिकं ।
 तैलं विलारणालानि कोपस्त्रीस्त्रप्रजागरान् ।
 व्यजेत् कादीनि द्रव्याणि हृद्यं स्वादु च शीलयेत् ।
 वाथी सेव्यं पयः कोष्णं पित्तं तु ससितं हितं ।
 अथग्री खोरबीजानि तिलैश्चकटलोफलं ।
 खर्जूरमांसमृद्विकामितादिसकलं भजेत् ।
 वीर्यचूतौ नारिकेलजलं तालफलानि च ।
 आनाहाकचिमूर्च्छार्तिधूमोद्गारविसृचिकाः ।
 एतेषु लघु शाल्यग्रं केवलं सघृतं हितं ।
 अतिवान्ती पिवेच्छिन्नारसं चौद्रेण संयुतं ।
 सखीटं वासकं रक्तपित्तं रुचिविपर्यये ।
 भृष्टधान्यं सितायुक्तमथवाचौद्रसंयुतं ।
 यवान्नं मधुसंयुक्तं पिवेद्वा महिषं दधि ।
 अथान्नं भक्षयेन्नित्यं मुखोष्णो न च वारिणा ।
 छिन्नाम्बुसहितं देयं दाहे जीर्णे मुधाजलं ।
 चार्द्रकं सर्षपं रन्धाफलं भृङ्गं कफोन्वने ।
 अन्येऽप्युपद्रवा ये स्युस्तत्तच्छान्त्यै यथोषधं ।
 दामिंशहिवसे काप्यं क्षानमामलकैस्तिलैः ।
 युक्तं रंज्यं वले जाते शनैरग्निबलादनु ॥

16. CATURBHUJA RASA.

चतुर्भुजरसः ।

सृतसूतस्य भागी ही भागिकं हेमभस्मकं ।
 शिला कसूरिका तालं प्रत्येकं हेमतुल्यकं ।
 सर्व्वं खल्लतले क्षिप्वा कन्धया मर्दयेद्दिनं ।
 परम्बपवेरावेष्टा धान्यगर्भे दिनद्वयं ।
 संस्थाप्य च तदुद्धृत्य सर्व्वं रोगेषु योजयेत् ।
 एतद्रसायनवरन्निफलामधुमर्दितं ।
 तद यथाग्निबलं खादेन्नलोपलितनाशनं ॥

चपकारे ज्वरे कासी शीघ्रे मन्दानले चये ।
 हृत्कान्धे शिरःकण्ठे गात्रकण्ठे विशिषतः ।
 वातपित्तसमुत्थांस कफजाम् नाशयेद्दुर्व ।
 सर्वापिधि प्रयोगैर्घ्ने व्याधयो नम्रसाधिताः ।
 कर्णभिः पञ्चभिश्चैव मन्त्रौषधि प्रयोगतः ।
 सर्व्वास्तान् नाशयन्त्याग्नौ त्वन्मिन्द्राशनिर्यथा ।
तत्तुर्भुजरसो नाम महेश्वरेण प्रकाशितः ॥

17. SŪTABHASMA PRAYOGA.

सूतभस्मप्रयोगः ।

शङ्खपुष्पी वचा ब्राह्मी कुष्ठमेला रसेः सह ।
सूतभस्मप्रयोगोऽयं रक्तिकादयमानतः ।
 सर्वापक्करनाशाय महादेवेन भाषितः ॥

18. VIŚVEŚVARA RASA.

विश्वेश्वरोरसः ।

रसाद्दश विषात् पञ्च गन्धकाद्दश शोधितात् ।
 तुल्याद्दश पलाशस्य बीजैश्च पञ्च कारयेत् ।
 क्षुद्राश्वभाग-धूपार-करहाटक नीलीतः ।
 दशकं दशकं कुर्याच्छोधयित्वा जटालवचः ।
 दशकं दशकं दत्त्वा कुचिलाद्दश नूतनात् ।
 भङ्गातकाश्च दशकं चूर्णयित्वा भिषक् ततः ।
 सुदिवसे बलिं दत्त्वा वैद्यः पूजापरायणः ।
 रक्तिका हितयं दद्यात् सहते यदि वा चयं ।
 वातरक्तं ज्वरं कुष्ठं स्वरस्पर्शमसौख्यदं ।
 आजानुस्फुटितं हन्ति विषजं वायुनिःसृतं ।
 कुष्ठमष्टादशविधमग्निमान्द्यमरीचकं ।
 विश्वेश्वरो रसो नाम विश्वनाथेन भाषितः ॥

वस्यतं कुष्ठरीजे यदीषधं मिषगां वरेः ।
वातरक्ते प्रयुञ्जीत कुर्व्याच्च रक्तमोक्षकं ॥

19. ĀMAVĀTĀRI VATIKĀ.

आमवातारि वटिका ।

रसगन्धकलीङ्गाभं तुल्यं टङ्गसैन्धवं ।
समभामं बिभृक्ष्वाच्च चूर्णाङ्गिगुग्गुगुलुः ।
गुग्गुलीः पादिकं देयं चिह्णतामूलवल्कलं ।
तत् समं चित्तकं देयं छत्रेण परिमर्द्ध्यत् ।
छादेन्नाषडयस्त्रयस्य विफलाचूर्णयोमतः ।
आमवातारि वटिका पाचिका मेदिका मता ।
आमवातं निहन्त्याश्च शुल्मशूलोदराणि च ।
यद्भृङ्गीहीदराष्टौणा-कामलापाङ्कुरोषकान् ।
अग्निशूलं शिरःशूलं वातरोगञ्च गृध्रसौं ।
अक्षगण्डं गण्डमात्रां क्षिमिकृष्ठभगन्दरान् ।
विद्रधिभक्तद्विज्ज अर्शसि गुदजानि च ।
आमवातारि वटिका पुरेजानेन चोदिता ॥

20. ŚULARĀJA LAUHA.

शूलराजलीङ्गम् ।

कर्षकं कान्तलीङ्गस्य शुद्धमभं पलान्मया ।
सिन्धुधाय पलत्रेकं मधुसर्पिसद्यैव च ।
सर्व्वमेकौकृतं पात्रं लौहदण्डेण मर्द्ध्यत् ।
मिकटु विफलासुखं विडङ्गं चञ्चलितकं ।
प्रत्येकं तोलकं मानं चूर्णितं तत्र दापयेत् ।
भक्षयेत् वातरुध्याय त्रिगिराम्बुपानतः ।
सर्व्वं दीपमभं शूलं कुचिशूलञ्च यत्भवेत् ।
हृत्शूलं पात्रशूलञ्च चक्षपितञ्च नात्रयेत् ।

अर्शांसि ग्रहणीदोषं प्रमेहांश्च विसृचिकां ।
यलराजमिदं लौहं हरेन परिनिर्मितं ॥

21. VAIDYANĀTHA VATI.

वैद्यनाथवटी ।

पथ्या विकटु सूतञ्च द्विगुणं कानकमथा ।
 धानकुनीरसैरञ्जलोलिकाधारसेः कृता ।
 गुड़िकोदरगुल्मादिपाण्डुमयविनाशिनी ।
 क्रिमि-कुष्ठ-गावकण्डू पीडकांश्च निहन्ति च ।
 गुडौ सिद्धफला चैवं वैद्यनाथेन भाषिता ॥

22. JOGEŚVARA RASA.

योगेश्वरीरसः ।

सूतकं गन्धकं लौहं नागञ्चापि वराटिकां ।
 ताभकं वङ्गभस्मापि व्योमकञ्च समांशिकं ।
 सूक्ष्मैलापतसुस्तञ्च विडङ्गं नागकेशरं ।
 रेणुकामलकञ्चैव पिप्पलीमूलमेव च ।
 एषाञ्च द्विगुणं भागं मर्दयित्वा प्रयत्नतः ।
 भावना तत्र दातव्या धात्रीफलरसेन च ।
 मात्रा चणकतुल्या च गुड़िकेयं प्रकीर्तिता ।
 प्रमेहं बहुमूत्रञ्च अश्मरौ मूत्रकृच्छकं ।
 व्रणं हन्ति महाकुष्ठमर्शांसि च भगन्दरं ।
योगेश्वरीरसोनाम महादेवेन भाषितः ॥

23. MAHĀ MRITYUNJAYA RASA.

महामृत्युञ्जयीरसः ।

रसगन्धकलौहाभं कुन्टीतुल्यतत्त्वकं ।
 सैन्धवञ्च वराटञ्च वागुजी विडङ्गकं ।

माषमाषां गुडौ कृत्वा कुष्ठरोगी प्रयोजयेत् ।
 देह्युद्धिं पुरा कृत्वा सर्वकुष्ठानि नाशयेत् ।
 एष चन्द्राननो नाम साक्षात् श्रीभैरवोदितः ॥

26. VĀLA RASA.

वालरसः ।

पलं शुद्धस्य सूतस्य गन्धकस्य पलं तथा ।
 सुवर्णमाक्षिकस्यापि भागाद् संप्रकल्पयेत् ।
 ततः कज्जलिकां कृत्वा लौहपात्रमध्ये दृढे ।
 केशराजस्य भङ्गस्य निर्गुण्ड्याः स्वरसेन च ।
 शुभं शिलामये पात्रे लौहदण्डेन मर्दयेत् ।
 राजिकासदृशीसैव वटिकां कारयेद्भिषक् ।
 एकैकां वटिकां स्वादेन्नागपत्नीदलद्रवैः ।
 इति विदोषसम्भूतं ज्वरसैव सुदारुणं ।
 श्विरज्वरश्च कासश्च शूलं सर्वभवन्तथा ।
 शिशूनां रोगनाशाय शिवेन परिकीर्तितः ॥

27. SRĪ MANMATHA RASA.

श्रीमन्मथरसः ।

रसगन्धकयोयाश्च कर्षमेकं सुशोधितं ।
 अभं निश्चन्द्रकं दद्यात् पलाहं सुविचक्षणः ।
 कर्पूरं शाणकं दद्यादङ्गुलिं कोलसन्धितं ।
 ताम्रं कोलाहकं तत्र निःशेषमारितं क्षिपेत् ।
 लौहं कर्षं सुजीणश्च दृढदारकबीजवत् ।
 विदारौ शतमूली च क्षुरबीजं बला तथा ।
 मर्कट्यतिवला चैव जातीकोषफले तथा ।
 लवङ्गं विजयाबीजं चैतमर्ज्जं यमानिकां

एतेषां चूर्णमादाय प्रक्षिपेत् श्रावणक्षितं ।
 गुग्गादयश्च भोज्यं क्रीडां चौरं पिवेदनु ।
 गृहे यस्य शतं स्त्रीणां विद्यन्तेऽतिश्रवायिनः ।
 न तस्य लिङ्गशैथिल्यमीषधस्यास्य सेवनात् ।
 न च युक्तं क्षयं याति न बलं क्रासतां व्रजेत् ।
 कामरूपी भवेद्दिव्यो हस्तः पीड्यवर्षवत् ।
 रसायनवरो वल्यो वाजीकरण-उत्तमः ।
रसः श्रीमन्मन्त्रो नाम महेशेन प्रकाशितः ॥

28. VASANTATILAKA RASA.

वसन्ततिलकोरसः ।

हृषोभक्तोत्प्लवकं घनं दिगुषितं लौहाक्षयः पारदा ।
 श्वेतारो नियतानु वङ्गयुगलशैकीकृतं मर्दयेत् ।
 मुक्ताविद्रुमयो रसेन समता गोक्षरवासेक्षुषा ।
 सञ्च वन्यकरीषकेषु सुहृदं तप्तत् पचेत् समधा ।
 कस्तूरीचनसारमर्द्धितरसः पश्चात् सुसिद्धो भवेत् ।
 काशनास-सपित्तवातकफजित् पाण्डुव्यादीन् हरिन् ।
 गुल्मादियक्ष्मीं विषादिहरणी मेघां तथा विंशतिं ।
 हृद्भोगादिहरो ज्वरादिशमनो वृष्यो वयोवर्धनः ।
 श्रेष्ठः पटिकरो वसन्ततिलको सत्युज्जयेनोदितः ॥

29. MAKARADHVAJA.

मकरध्वजः ।

स्वर्णस्य भागौ वङ्गश्च मौक्तिकं कान्तलीहकं ।
 ज्ञातीकीषफली रुप्यं कांस्यकं रसमिन्दुरं ।
 प्रवालं कस्तूरी चन्द्रमधकश्चैकभागिकं ।
 स्वर्णसिन्दूरतो भागाश्चत्वारः कल्पयेद्बुधः ।

नातः परतरः श्रेष्ठः सर्वरोगनिस्तनः ।

सर्वलोकहितार्थाय शिवेन परिकीर्तितः ॥

30. MAHĀ NĪLAKANTHA RASA.

महानीलकण्ठरसः ।

पल्लिकं नागभक्षाय भावयेत्तिमिपित्तः ।

तन्नागं सुसृतं स्वर्णं तीक्ष्णं वापि मिश्रयेत् ।

त्रिपलं भस्मसूतस्य त्रिपलं मृतमशकं ।

विपलं लौहभक्षाय सर्वमेकत्र कारयेत् ।

भावयेत् पृथक् कन्या ब्राह्मीनिगुं गडुका शमी ।

मुन्डी शतावरी क्षिप्वा कोकिलाक्षस्य बीजकैः ।

मृषली वृहदारोपिद्रवेरिभिर्भिषग्वरः ।

ततः सञ्चूर्णयेत् सर्वं तुल्यमेकादशाभिधं ।

वराण्योषाब्दवङ्गं ला जातीफललवङ्गकं ।

पूजयेद्गृष्पुण्यादौ नीलकण्ठं महेश्वरं ।

द्विगुणं भक्षयेदस्य मृत्युञ्जयमनुस्मरन् ।

क्षयमेकादशविधं ग्रहणीं रक्तपित्तकं ।

विविधान् वातजान् रोगान् चत्वारिंशदपैतिकान् ।

हन्ति सर्वान्मथानेष कामिनीनां शतं व्रजत् ।

यथेष्टाहारचिष्टो हि कन्दर्पसदृशो नरः ।

मेधावो बलवान् प्राज्ञो ब्रह्माक्षी भीमविक्रमः ।

पुत्रार्थिनी तथा नारी सैव पुत्रं प्रसूयते ।

अस्य मृतस्य माहात्म्यं वेति शश्वन्चापरः ॥

31. JĀRANA AND BHAKṢAṆA OF MICA AND MERCURY.

इत्यनुवासनं ।

आरणा हि नाम घातनगालनव्यतिरेकेण घनहेमादिपासपूर्वकपूर्व्यावस्थाप्रतिपन्नत्वं ।
किञ्च घनहेमादिलोहजीर्णस्य कृतलोचनीकरणानामिव शरीरिणां भक्षणेऽधिकार इत्यभि-
हितम् । फलश्चास्य स्वयमीश्वरेणोक्तं ॥१५॥

सर्वपापक्षयि जाते प्राप्यते रसजारया ।
 तत्प्राप्ती प्राप्यमेव स्याद्विज्ञानं मुक्तिलक्षणं ।
 मोक्षाभिव्यञ्जकं देवि जारयात् साधकस्य तु ।
 स्वयमुपिष्टिका देवि रसेन्द्रो लिङ्गमुच्यते ॥
 महर्षेण वन्दनमेव यासः पूजामभिधीयते ॥
 यावद्विनाशं वज्रस्थी जारये धार्यते रसः ।
 तावद्वर्षसहस्राणि शिवलोके महीयते ॥
 दिनमिकं रसेन्द्रस्य यो ददाति हुताशनं ।
 द्रवन्ति तस्य पापानि कुर्वन्मपि न लिप्यते ॥१६॥

अथ यासनादिविधिः ।

अजारयन्नधमहर्षमगन्धं

वाञ्छन्ति सूतात् फलमप्युदारं ।

चेन्नादनुमादपि शस्त्रजातं

कृषीवलासो भिषजस्य मन्दाः ॥

शुन्धगन्धेषु जीर्णे तु शुद्धाच्छतगुणाधिकः ।
 षड्गुणे गन्धके जीर्णे रसो भवति रोगहा ॥
 तुल्ये तु गन्धके जीर्णे शुद्धाच्छतगुणो रसः ।
 द्विगुणे गन्धके जीर्णे सर्व्वकुष्ठहरः परः ॥
 त्रिगुणे गन्धके जीर्णे सर्व्वजाराविनाशनः ।
 चतुर्गुणे तत्र जीर्णे बलीपक्षितनाशनः ॥
 गन्धे पञ्चगुणे जीर्णे क्षये चयहरो रजः ।
 षड्गुणे गन्धके जीर्णे सर्व्वरोगहरो रसः ॥
 अवशमिष्युवाचेन्द्रं देवः श्रीभैरवः स्वयं ।
 गन्धपिष्टिकया तत्र बीजः स्याद्गन्धजारये ॥
 तच्छाच्छतगुणो व्योमसत्वे जीर्णे तु तत्तन्मि ।
 ताम्बूलार्पितादिस्तवे जीर्णे गुणावहः ॥
 द्विजि जीर्णे सहस्रं कगुणसंघप्रदायकः ।
 वज्रादिजीर्णसूतस्य गन्धान् वेति शिवः स्वयं ॥

32. CURNARĀJA.¹

चूर्णराजः ।

चूर्णराजस्तथा चायं स्वयं रुद्रश्च भाषितः ।

जगतामुपकाराय दुर्णामारिरयं ध्रुवम् ॥

स्थानादपैति मेरुश्च पृथ्वी पथ्येति वा पुनः ।

पतन्ति चन्द्रताराश्च मिथ्या चेदं नहि ध्रुवम् ॥

ब्रह्महन्तृकृतघ्नाश्च क्रुराश्यासत्यवादिनः ।

वर्जनीया विदग्धेन भिषजा गुरुनिन्दकाः ॥

33. CANDRAPRABHĀ GUḌIKĀ.

चन्द्रप्रभागुडिका ।

क्लिमिरिपुदहन्व्योषतिफलामरदारुचव्यभूनिम्बम् ।

मागधिमूलं सुप्तं सशठीवचं माक्षिकञ्चैव ॥

लवणश्चारनिशायुगकुस्तुम्बुरुगजकणातिविषाः ।

कर्षाशिकान्येव समानि कुर्वीत

पलाष्टकं चाश्मजतोर्विदध्यात् ॥

निस्पतशुद्धस्य पुरस्य धीमान्

पलहयं लोह्रजस्तथैव ।

सिताचतुष्कं पलमत्र वांश्या

मिकुम्भकुम्भविसुगन्धियुक्तम् ॥

चन्द्रप्रभयं गुडिका प्रयोज्या

अशींसि निर्णशयते षडेव ।

भगन्दरं पाण्डुककामलाश्च

निर्णष्टवक्त्रैः कुरुते च दीप्तिम् ॥

हन्त्यामयान् पित्तकफानिलोत्थान्

नाडीगते मर्मगते ब्रणे च ।

गन्धार्बुदै विटधिराजयक्ष्मि

मेहं भगाख्ये प्रवले च योज्या ॥

¹ This formula is the same as the formula No. 38, Śāṅkara Lauha, described in page 64.

शुकचये चाग्ररिसूत्रक
 शुकप्रवाहेऽप्युदरामये च ।
 भक्तस्य पूर्व सततं प्रयोज्या
 तक्रानुपानं त्वयमक्षुषानं ॥
 चाजोरसो जाह्नवजीरसो वा
 पयोऽथवा शीतजलानुपानम् ।
 वलिन नागसुरगो जवेन
 हृद्या सुपर्णः श्ववो वराहः ॥
 शुकदीवान् निहन्यष्टौ
 प्रमेहानपि विंशतिम् ।
 वलीपलितनिर्मुक्तौ
 वृद्धोऽपि तरुणायते ॥
 न पानमोज्ये परिहार्यमस्ति
 न शीतवातातपमैद्युनेषु ।
 शब्दं समभ्यर्च्य कृतप्रसादे-
नातागुडोचन्द्रमसा प्रसादात् ॥
 अचमाधिकं स्पर्शमाधिकम्
 युगशब्दस्य निषेधे व सम्बन्धः ।
 तेन सैन्धवसौवर्चसौ यवचार
 सर्जिकाचारी हरिद्रादारुहरिद्रे ॥

किञ्च दशसूत्रकाये चतुर्गुणे उच्ये पचादिरहितनिरवकारगुग्गुली प्रविष्यालीङ्ग
 वस्त्रपूतं विधाय प्रचक्ष्णातपे विशोष्य पिष्टितगुग्गुलीः पलद्वयम् । सिताचतुष्कमिति
 पलचतुष्कं । निष्कुम्भोदनी, कुम्भस्निग्घता, एतयोः प्रत्येकं पलमेकं । छायाशुष्कवटी
 कार्या ॥

34. RASA SĀRDDĪLA.

रसशाईलः ।

बलिःसूतीनिम्बुरुस समरसौ भव्य सिकता
 द्वयैवन्ते कृत्वा समरविकषाटकचरणः ।

विषजं लुङ्गाभोलवकदलितचौद्रहविषा

बिलौदोमाषैकं द्रवयति समस्तं गदगणम् ॥

जरां वर्षेकेन चपयति च पुष्टिं वितनुते

तनीक्षेजस्तारं रमयति वधूनामपि शतम् ।

रसः श्रीमान् मृत्युञ्जय इति गिरीशेन गदितः

प्रभावं कीवान्धः कथयितुमपारं प्रभवति ॥

लुङ्गाभोलवकदलित इति मातुलङ्गद्रवकचक्षुः दत्त्वा त्रिदिनं महर्षेदिदम् ॥

35. ŚRĪ KĀMEŚVARA MODAKA.

श्रीकामेश्वरमोदकः ।

सम्यङ्भारितमधकं कटुफलं कृष्णगन्धाम्बुताः ।

मेथीमोचरसौ विदारिसुशक्ती गोक्षुरकचैरकम् ।

रश्माकन्दशतावरी त्वजमुदा माषाक्षिला धान्यकम् ।

यष्टीनागवला वला मधुरिका जातीफलं सैन्धवम् ।

भागौककर्कटशृङ्गकं विकटुकं जौरदयं चिचकम् ।

चातुजातपुनर्णवा गजफला द्राक्षाशटी वासकं ।

वीजं मर्कटिशाल्मलीभवमिदं चूर्णसमं कल्पयेत् ।

चूर्णाङ्गविजया सिता द्विगुणिता मध्वाज्ययोः पिष्टितम् ।

कर्षार्द्धं गुडिकाथ कर्षमथवा सेव्या सता सध्वेदा ।

पेयं चौरयुतं सुवीर्यकरणी सन्धेऽप्ययं कामिनाम् ।

वामावश्यकरः सुखातिमुत्तमः प्रौढाङ्गनाद्रावकः ।

क्षीणि बुष्टिकरः शयन्यकरो हन्याशु सर्व्वामयम् ।

कासश्वासमहातिसारश्मनो मन्दाग्रिसन्दीपनः ।

दुर्धामयङ्क्षौप्रमेहनिवहश्च आक्षिपितप्रणत् ।

निव्यानन्दकरो विशेषकवितावाचा विलासीङ्गवः ।

धत्ते सर्व्वगुणं महास्थिरमतिर्बालो नितामोत्सवः ।

अभ्यासेन विह्वलि सत्युपलितं कामेश्वरो वत्सरात् ।

सर्व्वेषां हितकारिणा निगदितः श्रीवैद्यनाथेन सः ।

इहानां मदमोदयोदयकरः प्रीदाङ्गनांसेवने ।

सिद्धोऽयं मम हृष्टिप्रभवकरोभूषेः सदा सेव्यताम् ॥

36. SIVA GUDIKĀ.

शिवा गुडिका ।

काले तु रवितापाब्धे कृष्णावसर्जं शिलाजतुप्रवरम् ।

विफलारससंयुक्तं वाङ्मयं युक्तं पुनः युक्तम् ॥

दशमूलस्य गुह्यं रसे वल्गायास्तथा पटीलस्य ।

मधुकरसैनोन्मूले वाङ्मयं वाङ्मयं भावयेत् क्रमशः ॥

एकाङ्गं चौरिच तु तत् पुनर्भावयेच्छुक्तम् ।

सप्ताङ्गं भाव्यं स्यात् कायेनैवां यथाशामम् ॥

काकोत्थी हे मेदे विदारोद्युक्तं जतावरी द्राक्षा ।

अष्टिगुणधर्मवीरामुच्छितिका जीरकेऽंशुमत्यौ च ॥

राजापुष्करचिचकदन्तीभक्त्याकलिङ्गचन्द्राब्दाः ।

कटुका ग्रन्थी पाठे तानि पलांशिकानि कार्याणि ॥

अव्दीप्ते साधितानां रत्नेन पादांशिकेन भाव्यानि ।

निरिजस्यैवं भावितशुद्धस्य पलांशि दश षट् च ॥

द्विपलं विश्वमागधिकाकटुककंटाख्यमरिचानाम् ॥

चूर्णं पलं च विदार्यास्तास्त्रीयपलांशि चत्वारि ॥

वीरुषं सितापलांशि चत्वारि घृतस्य माषिकस्ताटी ।

तिलतैलस्य द्विपलं चूर्णं द्विपलांशि पञ्चानाम् ॥

त्वक्चौरिपलत्वं नाबैलानां मिश्रयित्वा तु ।

निरिजस्य वीरुषपलैर्गुडिकाः कार्यास्ततोऽचसमाः ।

ताः शुष्का नवकुम्भे जातीपुष्पाधिवासिते म्याप्याः ॥

तासामेका काली भत्या पेयापि वा सततम् ॥

चौररसदाङ्गिमरसाः सुरासवं मधु च मिश्रितोद्यानि

प्राचीकनानि तासामनुपाने वा प्रशस्यन्ते ।

वीर्यं लघुपयोजास्त्रीनिर्व्यूषभोजी स्यात् ।

सप्ताङ्गं वाङ्मयः परं भवेत् सर्वं सामान्यम् ॥

भुक्तापि भक्षितेयं यदृच्छया नावहेइयं किञ्चित् ।
 निरुपद्रवा प्रयुक्ता सुकृमारकैः कामिभिश्च ॥
 संवत्सरप्रयुक्ता हन्त्येषा वातशोणितं प्रबलम् ।
 बहुवार्षिकमपि गाढं यन्म्राणश्चाक्यवातश्च ॥
 ज्वरयोनिशुक्रदोषझीहार्शःपाण्डुरहणीरोगान् ।
 ब्रध्नवमिश्रुत्वापीनसहिष्णाकासारुचिश्चासान् ॥
 जठरं श्वितं कुष्ठं पाण्ड्यं क्लीब्यं मदं क्षयशोषम् ।
 उन्मादापस्मारी वदनाक्षिशिरोगदान् सर्वाङ्गान् ॥
 आनाहमतौसारं सासृग्दरं कामलाप्रमेहांश्च ।
 यकृद्वर्ज्दानि विद्रधिभगन्दरं रक्तपित्तञ्च ॥
 अतिकाश्र्यमतिस्थोल्घं स्वेदमथ श्लैपदञ्च विनिहन्ति ।
 दंष्ट्राविधं समीलं गराणि वह्नप्रकाराणि ॥
 मन्त्रौषधियोगान् विप्रयुक्तान् भौतिकांस्तथा भावान् ।
 पापालक्ष्मणी चैयं शमयेद्गुडिका शिवा नाम्ना ॥
 वल्ल्या हृष्या घ्न्या कान्तिशःश्रीप्रजाकरी चैयम् ।
 दद्यान्नुपवृत्तभतां जयं विवादे सुखस्था च ॥
 श्रौमान् प्रकष्टमेधाः क्षृतिवृद्धिवलान्वितोऽतुलशरीरः ।
 पुष्ट्योजोऽतिविमलेन्द्रियतेजोबलमम्पदुपेतः ॥
 वलीपलितरोगरहितो जीवेच्छरदां शतद्वयं पुरुषः ।
 संवत्सरप्रयोगाद्वाभ्यां शतानि चत्वारि ।
 सर्व्वामयजित् कथितं मुनिगणभक्त्यं रसायनरहस्यम् ॥
 समुःभूवास्तमन्यनोत्यः स्वेदः शिलाभ्यो नृतवद्भिरेः प्राक् ।
 यो मन्दरस्यात्ममुखा हिताय न्यस्तः स शैलेषु शिलाजरुपी ॥
 शिवागुडिकेति रसायनमुक्तं गिरिशेन गणपतये ।
 शिववदनविनिर्गता यस्मान्नाम्ना तस्माच्छिवा गुडिका ॥
 शैवसिद्धान्तोक्तो शिवागुडिकैयम् ।

37. KRAVYĀDA RASA.

क्रव्यादरसः ।

द्विपलं गन्धकं शुद्धं द्रावयित्वा विनिक्षिपेत् ।
 पारदं पलमानेन स्रतशुलायसौ पुनः ॥
 तेन मानेन संमिश्र्य पञ्चाङ्गुलदले क्षिपेत् ।
 ततो विचूर्ण्य यत्र न निक्षिप्यायसपात्रके ।
 चूर्णां निवेश्य यत्र न ज्वालयेन्मृदुगानलम् ।
 प्रस्थमात्रं रसं सम्यक् जम्बीरस्य प्रयोजयेत् ।
 संचूर्ण्य पञ्चकोलोत्थैः कषायैः साक्षवेतसैः ॥
 भावनाः खलु दातव्याः पञ्चाशत् प्रमितास्तथा ।
 शट्शतकचूर्णेन तुल्येन सह मेलयेत् ॥
 तद्वै कृत्वा लवणं सञ्चतुल्यं मरीचकम् ।
 समथा भावयेत् पश्चात् चक्रकचारवारिणा ॥
 ततः संशोष्य संपिष्य कूर्घ्वास्तु जठरे क्षिपेत् ।
 अत्यर्थं गुरुमांसानि गुरुभोज्यान्वनेकशः ॥
 भक्षित्वा कष्टपर्यन्तं चतुर्वर्त्मितं रसम् ।
 पटुस्त्रतक्रसङ्घितं पिवेत्तदनुपागतः ॥
 क्षिप्रं तज्जीर्यते भुक्तं जायते दीपनं पुनः ।
 रसः क्रव्यादनामाद्यं प्रोक्तो मत्स्यानभैरवेः ¹ ॥
 सिङ्गुलचौण्डिपालस्य बहुमांसप्रियस्य च ।
 दिष्टोयासंसनासाद्य भैरवानन्दयोगिना ॥
 कूर्घ्वाद्दीपनमुद्धतञ्च पवनं दुष्टामयोष्ठीषणम् ।
 तुन्दसौख्यनिवर्हणं गदह्वरं गुल्फार्तिमूलापहम् ॥
 गुल्फग्रीवविनाशनं लघुभुजां विध्वंसनं सनम् ।
 वानप्रस्थिमहीदरापहरणं क्रव्यादनामा रसः ॥

¹ This formula is ascribed to Manthāna Bhairava, one of the noted Indian alchemists. It is wrongly referred to Śiva.

38. SAÑKARA LAUHA.

शङ्करप्रणीतं लौहम् ।

प्रथम्य शङ्करं रुद्रं दण्डपाणिं महेश्वरम् ।

जीवितारोग्यमन्त्रिष्ण्वारदीऽष्टकदीश्वरम् ॥

मुखोपायेन हे नाथ ! शस्त्रचाराग्निभिर्भिन्ना ।

चिकित्सामर्शसां नृणां कारुण्याऽक्तमर्हसि ॥

नारदस्य वचः श्रुत्वा नराणां हितकाम्यया ।

अर्शसां नाशनं श्रेष्ठं भैषज्यं शङ्करीऽवदत् ॥

पाराक्य वज्रादिलोहानादायाम्बतमं शुभम् ।

कृत्वा निर्मलमादौ तु कुनड्या माचिकेण च ॥

पत्तुरमूलकल्के न लिम्पेद्रसयुतेन च ।

“ कुनटी ” मनःशिलाः । “ माचिकं ” सुवर्णमाचिकम् ।

“ पत्तुरं ” पटकार इति लोके । “ रसं ” पारदः ।

वज्रौनिक्षिप्य विधिवत् साराङ्गारेण निर्हसेत् ।

ज्वाला च तस्य रौद्र्या त्रिफलाया रसेन च । “ सारः ” काष्ठं ।

ततो विज्ञाय गलितं शङ्कुनाहं समुच्छिद्येत् ।

त्रिफलाया रसे पुते तदाकृष्य तु निर्हसेत् ॥

न सम्यक् गलितं यत् तेनैव विधिना पुनः ।

भातं निर्वापयेत्तच्छिञ्चोहं तन्निफलारसे ॥

यज्ञोहं न मृतं तत्र पाच्यं भूयोऽपि पूर्ववत् ।

मारणाद्ग मृतं यच्च तत् त्यक्तम्यमलोहवत् ॥

ततः संशोष्य विधिवच्चूर्णयेज्जोहभाजने ।

लोहं तच्च तथा यत्स्याद्वयदा सूक्ष्मचूर्णितम् ॥

कृत्वा लोहमये पात्रे मृत्तिकाभिस्तरन्मुके ।

रसैः पक्षीपमं कृत्वा तं पचेद् गोमयाग्निना ॥

पुटानि क्रमशो दद्यात् पृथगेभिर्भिन्धानतः ।

त्रिफलाद्रकभृङ्गानां कैशराजस्य बुद्धिमान् ॥

मानकन्दक भङ्गात् वज्रोणां ग्रन्थस्य च ।
 इतिकर्षपलाशस्य कुलिशस्य तथैव च ॥
 “भक्तः” भेङ्गरिया । “केशराजः” केशराम इति ।
 पुटे पुटे चूर्चयित्वा लोहात् षोडशिकं पलम् ।
 तन्मात्रं विफलायाश्च पलेनाधिकमाहरेत् ।
 अष्टभागावशेषे तु रसे तस्याः पचैद् बुधः ॥
 अष्टौ पलानि दत्त्वा च सर्पिषी लौहभाजने ।
 तां वा लोहदर्व्यां तु चालयेद्विधिपूर्वकम् ॥
 ततः पाकविधानश्रेते स्वेष्टीर्हञ्च सर्पिषि ।
 खदुमध्यादिमेदेन गृह्णीयात् पाकमादतः ॥
 आरम्भे तद्विधानश्रेः छतकौतुकमङ्गलः ।
 आमरं द्रुतसंयुक्तं विलिख्याद्रक्तिकाश्रमात् ।
 वादशरक्तिकापर्यन्तं यथाश्रिवलं खादेत् ॥
 वर्द्धमानानुपानञ्च गन्धचौरेण संयुतम् ।
 गन्धाभावे त्वजायाश्च खिग्धहृद्यादिभोजनम् ॥
 सद्यो वज्रिकरश्चैव भस्मकश्च नियच्छति ।
 इति वातं तथा पिप्पं कुष्ठानि विषमञ्जरम् ।
 गुल्फाक्षिपाङ्कुरीगाश्च निद्रालस्यमरीचकम् ।
 शूलञ्च परिणामञ्च प्रमेहमववाङ्मुकम् ।
 शयथुं हृदिरक्षावं दुर्द्धामां विशिषतः ।
 वलकृद् हृन्धश्चैव कान्तिदं स्वरबोधनम् ।
 शरीरलाघवकरमारोग्यं पुष्टिवर्द्धनम् ।
 आयुष्यं श्रीकरश्चैव बलतेजस्करं शुभम् ॥
 सखीकं पुन्यजननं बलीपलिवनाशनम् ।
 दुर्द्धामाशिरवं नाका दृष्टो वारसहस्रशः ॥
 अनेनाशोसि दहन्ते बध्नन्तूलञ्च वज्रिणा ।

39. CANDRAPRABHĀ GUṬIKĀ.¹

चन्द्रप्रभागुटिका ।

क्लिमिरिपुदहनव्योषत्रिफलामरदारुचव्यभूनिष्ठाः ।
 मागधीमूलं सुखं शटी वचा धातुमाचिकचैव ।
 लवणचारनिशायुक्तुस्तुम्बुगजकणासहातिविषाः ।
 कर्षांशिकान्येव समानि कुर्व्यात् पलाष्टकश्चाश्मजतु प्रदद्यात् ।
 निःपत्रगृहस्य पुरस्य धौमान् पलद्वयं लोहरजसथैव ।
 सिताचतुष्कं पलमत्र वा स्यात् निकुम्भ कुम्भ त्रिमुगन्धियुक्तम् ।
 पृथक्पत्रं चूर्णमथावपेक्ष चन्द्रप्रभयं गुटिका विधेया ।
 ज्वरातिसारग्रहणीविकारश्चांशसि निर्नाशयते षडैव ।
 भगन्दरान् कामलपाण्डुरोगान् निर्नष्टवक्त्रैः कुरुते च दौर्गमम् ।
 हन्यामयान् पित्तकफानिलोत्थान् नाडीगते सन्ध्यागते व्रणे च ।
 क्षतक्षये गृध्रसि यक्ष्मारोगे मेहे गजाख्ये प्रवले प्रयोज्या ।
 शुक्रक्षये चास्मरीमूत्रकृच्छ्रे शुक्रप्रवाहेऽपुदरामये च ।
शब्धुं समभ्यर्च्य ऽ कृतप्रसादं प्राप्ता गुटी चन्द्रभसा प्रशस्ता ।
 न पानभोज्ये परिहारवादी नशीतवातातपसैथुनेषु ।
 भक्तस्य पूर्वं सततं प्रयोज्या तक्रानुपानाप्सथमस्तु पाना ।
 अजारसो जाङ्गलजीरसो वा पयोऽथवा शीतजलानुपानम् ।
 शक्रदोषान्निहन्त्यष्टौ प्रसैद्वांश्चापि विंशतिम् ।
 वलिपलितनिर्मुक्तौ वृद्धोऽपि तरुणायते ॥
 गिरीजतुगुग्गुलुलौहान्कौक्याथ भावयेद्वह्नुशः ।
 काथैस्तद्व्याधिहरेन्दुन च चूर्णीकृतं मिलितम् ।
 क्लिमिरिपादिकचूर्णैर्गिरिजतुसमप्रधान्यपटीलयूषेण ॥

इति चन्द्रप्रभागुटिका ।

¹ This formula is the same as the formula No. 33, Candraprabhā Guṭikā, p. 58.

40. MAHĀ BHALLĀTAKA AVALEHA.

महामल्लतकावलीहः ।

निम्बगोपादृष्टा कटौ वायन्ती विफला घनं ।
 पर्पटावल्गु जानन्तावचाखदिरचन्दनम् ।
 पाठाशुद्धीश्टौभार्गीवासाभूनिम्बवत्सकम् ।
 श्यामीन्द्रवारुणी मूर्ध्नाविहङ्गेन्द्रयवानलम् ।
 इक्षिकर्णामृतद्रेकापटोलरजनीहयम् ।
 कशारग्वधसप्ताह टट्टवेवोद्यताफलम् ।
 मञ्जिष्ठा लाङ्गलौराखानक्तमालपुनर्गवा ।
 दन्तीबीजकसारश्च भङ्गराजं कुरयटकम् ।
 अङ्गीटकश्च शाखोटं द्विपलांशं पृथक् पृथक् ।
 गृहीयात्तानि सर्वानि जलद्रोणे पचिष्णुनेः ।
 अष्टमांशावशेषानु कषायमवतारयेत् ।
 विधाय वाससा पूतं स्थापयेद्भाजने हृदे ।
 भल्लतकसङ्ख्याधि हित्वा तु चार्मलेऽभसि ।
 पचिदष्टावशेषं तत्कषायमवतारयेत् ।
 गुडं शतपलं दत्त्वा लङ्घवत्तत्पचिष्णुनेः ।
 विकटु विफला सुप्तं विङ्गं चिचकं तथा ।
 सैन्धवं चन्दनं कुष्ठं दीप्यकं च पलं पृथक् ।
 सौगन्ध्यायं क्षिपेत् तत्र चातुर्ज्यातं पलं पलम् ।
 महामल्लतकी ह्येष महादिवेन भाषितः ।
 प्राणिनां हितकामेन जयेच्छीघ्रं प्रयोजितः ।
 शिवनीडुम्बरं दद्रुमचजिह्वानु काकषम् ।
 पुण्डरीकं सचर्माख्यं पिच्छोटं रक्तमखलम् ।
 कच्छूकापाख्यं कुष्ठं पामागश्च विपादिकाम् ।
 वातरक्तं षड्रशीसि पाखुरोगप्रणामृत्तिमौम् ।
 रक्तपित्तमुदावर्तं कासं चासं भगन्दरम् ।
 सदाभ्यासेन पलितनामवातं सुदुस्तरम् ।

निर्यन्मणस्तु कथितौ विहाराहारमैद्युने ।
 कुरुते परमं कान्तिं प्रदीप्तं जठरानलम् ।
 अतुपानं प्रयोक्तव्यं षष्ठिन्नातोद्यं पथोऽथवा ।
 भोजने तु सदा त्याज्यमुष्णमन्नं विशेषतः ।

41. RASÂLÂ.

रसाला

सत्वं गुडूच्या गगनं सलोभ्रमिलासितामागधिकासमेतम् ।
 एतत् समेतं मधुनावलीढं रामाशतं सेवयतीव षष्ठः ॥
 गवां विरूढवत्सानां सिद्धं पयसि पायसम् ।
 गोधूमचूर्णञ्च यथा सितामधुष्टतान्वितम् ।
 भुक्त्वा हृष्यति जीर्णोऽपि दशदारान् व्रजत्यपि ॥
 दध्नीऽर्द्धादकमीषदम्नमधुरं खण्डस्य चन्द्रद्युतेः
 प्रस्थं चौद्रपलम्पलञ्च हविषः शुण्डाश्च माषाष्टकम्
 तद्वन्माषचतुष्टयं मन्त्रितः कर्षं लवङ्गन्तथा
 धृत्वा शुक्लपटे शनैः करतलीनीद्रान्य विस्त्रावयेत् ॥
 मृद्वाण्डे मृगनाभिचन्दनरसमृष्टेऽगुरुहृत्पिते
 कर्पूरेण सुगन्धितं तदखिलं संलीड्य संस्थापयेत् ।
 स्वस्थार्थे मकरेश्वरेण रचिता ह्येषा रसाला स्वयम्
 भोक्तुर्भग्नयदीपनी सुखकरी कान्तेव नित्यं प्रिया ॥

42. SIMHAÑĀDA GUGGULU.

सिंहनादगुग्गुलुः ।

पलत्रयं कषायस्य विफलायाः सुसूषितम् ।
 सौगन्धिकपलत्रैकं कौशिकस्य पलं तथा ॥
 कुङ्कुमं चित्रतैलस्य सम्भ्रमादाय यवतः ।
 पाचयेत् पाकविद्भेद्यः पात्रे लौहमये दृढे ॥

इति वातं तथा पित्तं स्नेभाच्च' खञ्जपङ्कताम् ।
 चासं सुदुर्जयं इति कासं पञ्चविधं तथा ॥
 कुष्ठानि वातरक्तानि गुल्मशूलोदराणि च ।
 चामवातं जयेदतदपि वैद्यविवर्जितम् ॥
 एतदभ्यासयोगेन जरापलितनाशनम् ।
 सर्पिकौलरसीपेतमन्त्रीयाष्टालिषष्टिकम् ॥
सिंहनाद इति ख्यातो रोगवारणदर्पहा ।
 वज्रिहञ्जिकरः पुंसां भाषितो दण्डपाणिना ॥

43. FORMULA TO CURE ŚVITRA.

श्वेतजयन्तीमूलं पिष्टं पीतञ्च मन्वपयसेव ।
 त्रितं मिहनि नियतं रविवारे वैद्यनाथाज्ञा ॥

44. KUSUMBHĀDYA TAILA.

कुसुम्भाद्य' तैलम् ।

कुसुम्भकुङ्कुमीशीरमञ्जिष्ठारक्तचन्दनैः ।
 सिक्थसर्जरसातङ्गुङ्गुलीसैन्धवाशुदैः ॥
 मूर्वाशतावरीलङ्गामधुकैस पलाशकैः ।
 चतुर्गुणेन पयसा पथितैलादकं भिषक् ॥
 अर्दितं कर्णशूलं च शिरःशूलं च दाहयम् ।
 गृध्रसीं वातरक्तं च पचाघातं व्यपोहति ॥
 तबसिषु च पानिषु नखे च कर्णपूरणे ।
 चभ्यङ्गे च शिरोरोमे तैलं विद्याद्यथाऽस्तम् ॥
 पाणिपादांसदाङ्गिषु मुदयोगिरजासु च ।
 सुप्तिवातेऽस्त्रिभङ्गे च देवदेयेन पूजितम् ॥

45. VRHAT SIVA GUṬIKĀ.¹

वृहत्सिवगुटिका ।

काले रवितापाब्धे कृष्णायसे शिलाजतुप्रवरम् ।
 विफलारससंयुक्तं त्राहं विशुद्धं पुनः शुष्कम् ॥
 दशमूलस्य गडुच्या रसे बलायास्तथा पटोलस्य ।
 मधुकरसे गोमूत्रे प्रहरं भावयेत्क्रमश एकाहम् ॥
 क्षीरेण तु तत्परतो भावयित्वा गवां पुनः शुष्कम् ।
 सप्ताहं भाव्यं स्वात्क्रायेनैषां यथालाभम् ॥
 काकोल्यौ च भेदे विदारि युष्मं शतावरी द्राक्षा ।
 ऋद्धियुगधर्भवीरामुखीतिकाजीरकांशुमत्यश्च ॥
 रास्त्रापुष्करचित्रकदन्तीभकणाकलिङ्गचव्यान्दाः ।
 कटुका शङ्खी पाठा चैति पलांशानि कार्याणि ॥
 अम्रद्रोणसाधितानां रसेन पादांशकेन भाव्यानि ।
 गिरिजस्यैव भावितगुडस्य पलानि दश षट् च ॥
 द्विपलं च विश्वधात्रीमागधिकाकर्पटार्क्यमरिचानाम् ।
 चूर्णपलं च विदार्या तालीसपलानि चत्वारि ॥
 षोडश सितापलानि तु चत्वारि घृतस्य मानिकस्याष्टौ ।
 तिलतैलस्य द्विपलं चूर्णस्य पलानि पञ्च पञ्चानाम् ॥
 त्वक्क्षीरिपतत्वङ्गागैलानां च मिश्रयित्वा तु ।
 गिरिजस्य षोडशपलैर्गुटिकाः कार्यास्ततोऽञ्जस्रमाः ॥
 ताः शुष्काः नवकुम्भे जातीपुष्पाधिवासिते स्वाध्याः ।
 तासामेका काले भल्या पेयापि वा सततम् ॥
 क्षीररसदाडिमरसाः सुखासवा हिमकरश्चिश्चिरतोवाणि ।
 आलोडनाय तासामनुपाने वा प्रशस्यन्ते ।
 जीर्णे लब्धप्रयोजान्कलनिर्यह्युषभोजी स्वात् ।
 सप्ताहं भोजनमेवमतः परं भवेत्सर्वसामान्यम् ।

This formula is the same as the formula No. 36, Siva Guṭikā, p. 61.

भुक्ताऽपि भक्षितं यद्वच्छया नावहेत्यं किञ्चित् ।
 निरुपद्रवा प्रयुक्ता सुकुमारैः कामिभिश्चैव ॥
 संबलः प्रयुक्ता इन्धे ण वातशोषितं प्रबलम् ।
 बहुवर्षिकमपि गादं यच्छासं चाक्षवार्तं च ॥
 ज्वरयोनिशुक्रदोषान् ग्रीहार्थः पाण्डुहृदयहृत्सीरोगान् ।
 बर्धनमिगुणपौनसङ्गिकावासावचिकासान् ॥
 जठरं त्रिवं कुष्ठं वाय्द्यं क्लेब्यं चयं मदं शोषम् ।
 उन्मादापहारी वदनाक्षिशिरीगतान्नीगान् ॥
 आनाहमतीसारमसृग्दरकामलां प्रमेहान् च ।
 गण्डगण्डापचर्बुदविद्रधिभगन्दरं रक्तपित्तं च ।
 क्षतिकार्ष्णमतिस्थील्यं खेदमपि श्लेपदं च विनिहन्ति ।
 दंष्ट्राविषमतिभीमं गरलानि बहुप्रकाराणि ॥
 मन्त्रीवधिप्रयुक्तानरियुक्तान् कौलिकांस्तथा सर्पान् ।
 पापमलक्ष्मीं चैयं शमयेद् गुटिका शिवा नाम ॥
 वल्गु हृष्टा धन्वा कान्तियशःश्रीप्रजाकरी चैयम् ।
 दद्यान्नृपबल्लभतां जयं विवादे सुखस्या च ॥
 श्रीमाप्रकृतमेधास्मृतिबुद्धिबलान्वितौ दृढशरीरः ।
 पुष्ट्योजोवर्धेन्द्रियतेजोबलसंपदीपितः ॥
 बलीपलितरीगरहितो जीवेच्छरदां शतत्रयं पुरुषः ।
 संवत्सरप्रयोगात्, हास्यां शतानि चत्वारि ॥
 सर्वामयजिग्यक्षितं मुनिभिर्भक्त्या रसायनवरिष्ठम् ।
 शिपमुटिकैति प्रथितसूक्तं गिरिशेन गणपतये ॥

46. VYOŚĀDYĀ GUTIKĀ.

व्योषाद्या गुटिका ।

व्योषं सवन्धिकं पथ्या चित्तकं जीरकद्वयम् ।
 अजनीदां यवानीं च बर्षां चैवमवल्लुङ्गम् ॥
 लवणवितथं चारं समभागानि चूर्णयेत् ।
 यावन्मैतानि द्रव्याणि तावन्तं गुग्गुलुं सभञ्ज ॥

पलार्धसंमितं चात्र योजयेन्नास्त्रवेतसम् ।
 गुटिकैषा हिता वाते सानि सम्यस्थिमन्त्रगे ॥
 नवं करोति भद्रं च जठरानलदीपनम् ।
 पूजिता देवदेवेन कालपादेन शम्भुना ॥

47. VRIHAT SĀYAMBHUVĀ GUGGULU.

बृहत्सायम्भुवगुग्गुलुः ।

अलम्बुषालोद्बर्णमनयीर्हं पले पले ।
 पलत्रयं च ताप्युत्पाद्वाक्कुची पलपञ्चकम् ॥
 शिलाजतु तयोस्तुल्यं पलानि दश गुग्गुलीः ।
 सर्वाण्येकत्र संचूर्ण्य गुटिकां कारयेद्बुधः ॥
 शण्यं कर्षार्धं कर्षं वा ततः खादेत्सयवतः ।
 वातरक्तं च कुष्ठानि शिवाणि विविधानि च ॥
 भगन्दरान् क्षुद्ररोगानिर्शांसि ग्रहणीगदान् ।
 वसिजांस्तु क्रदोषांश्च पाण्डुतासुदराणि च ॥
 शोफप्रीपदमानाहं यक्ष्माण्यं च विशेषतः ।
 नाडीव्रणांश्च सर्वास्तु हन्याद्विद्रधिहृद्गदान् ॥
 वृष्यो बल्यश्च धन्यश्च केश्यो मेधाप्रिवर्धनः ।
 आयुर्वर्णकरस्त्वयः पुत्रसौभाग्यदक्षया ॥
 गर्भसन्धानकृत्प्रोक्तो गर्भपुष्टिकरः परम् ।
 कालपादेन विख्यातो नाम्ना स्वायं भुवो भुवि ।

48. KUMARYĀSAVA.

कुमार्यासवः ।

द्रोणमानं कुमार्यासु रसं भास्वे निधापयेत् ।
 तुलार्धं दशमूलं तु तदर्धं पीपली जटा ॥
 तक्षकं धन्यासं च चित्रार्धं च परिचिपेत् ।
 प्रस्थार्धममृता त्रेया तदर्धममृता तथा ॥

लोभकामलकं पथं मज्झिहा च कलिद्रुमः ।
 चय्यं च कुष्ठमधुकं कपित्थं सुरदारुकम् ॥
 कृमिशतुर्मागधिका भार्गो स्यादष्टवर्गकम् ।
 जीरकं क्रमुकी रास्त्रा शठी रेणकमेव च ॥
 ग्रहणी निशा प्रियङ्गुश्च मांसी मुक्ता च सारिवा ।
 वासा वरी शुक्रवीजं नागकेसरमेव च ॥
 पुनर्नवा समांशानि षड्भिर्द्रोणीर्जलस्य तु ।
 काथयेदनया गीत्या चतुर्थांशं जलं नयेत् ॥
 विंशत्यला च मृद्वीका दन्तसंख्यापलं मधु ।
 गुडस्तलाचतुष्कं च तदर्धा धातकी भवेत् ॥
 पल्लव्यं लवङ्गानि कङ्कीलं मलयोद्भवम् ।
 चातुर्जातं तथा कृष्णं मरिचं जातिपत्रकम् ॥
 आकल्लकं जातिफलं कपिकच्छुश्च दीप्यकम् ।
 वचा खदिरसारश्च दहनं जीरकं तथा ।
 यवान्नी वालकं विश्वा मुक्ता धान्यं हरौतकी ।
 हपुषा तिलिडीकं च चूर्णमेषां प्रयोजयेत् ॥
 भाण्डे पुराणे सुखिर्गन्धं धूपिते गन्धमेघजैः ।
 कोष्ठसारं तथा तप्तं भूमी मांसं विनिक्षिपेत् ॥
 यो रोगी प्रातस्तथाय पल्लमेकं तु भक्षयेत् ।
 धातुचयं जयेत्कासं श्वातं पञ्चविधं तथा ॥
 अर्शांसि वातरोगांश्च यद्वक्षीपाण्डुकामलाः ।
 हलीमकमुदवर्तं गुग्गुलुं पञ्चविधं जयेत् ॥
 आभ्रानं कुक्षिशूलं च प्रत्याभ्रानं गुदग्रहम् ।
 अष्टौलिकां च हृद्रोगानेतान् व्याधीन्विनिर्जयेत् ॥
 कुमार्यासव इत्येष कथितः शूलपाणिना ।

49. NĀLIKERĀSAVA.

नालिकेरासवः ।

नालिकेरीदकं चैव द्रोणमात्रं प्रदापयेत् ।
 रज्जो रसस्य द्रोणार्धं शाक्यत्वा रसप्रस्यकम् ॥

दशमूलरसस्यापि प्रस्थमात्रं तथैव च ।
 घृतभाण्डे विनिलिप्य मध्ये चूर्णं निवेशयेत् ॥
 चातुर्जातकधातकोः पलान् षोडशसंख्यया ।
 शणमात्रा त् कस्तूरी केशरं तगरं तथा ॥
 चन्दनं देवपुष्पं च पलमात्रं प्रथक् प्रथक् ।
 मासादूर्ध्वं पिवेच्चामुं रूपे कामसमो भवेत् ॥
 ब्रह्मोऽपि तरुणीं गच्छेत् षष्ठीऽपि पुरुषायते ।
 वलीपलितसंयुक्तः शतायुश्च भवेन्नरः ॥
नालिकैरामवः प्रोक्तः शम्भुना परमहिना ।

50. VRHAT SAHACARA TAILA.

बृहत्सहचरतैलम् ।

काथे साहचरे शतावरियुते क्षुद्रामृतैरगुञ्ज
 श्योनाकारणिविल्वगोक्षरयुते मिह्राग्रिमन्योद्भवैः ।
 रास्त्रोशीरविशालदारुतगरं म्लक्ष्णपदमेदानखैः
 स्पृक्काशैलघनेलवालुसरलैः कङ्कोलकुष्ठोत्पलेः ॥
 कौन्तीकेशीवलाद्रिसारिवनिशाश्यामाशताह्वानतै-
 र्मञ्जिष्ठापुरसिङ्गचन्दनवरैश्चण्डाङ्गस्थीणैश्चकैः ।
 श्रीवेष्टागकुरोप्रकुङ्कुमवरैः कल्कैः समाशेरिमे-
 स्तेलं क्षीरसमं विपाच्य विधिना वस्त्रौ च नस्ये ध्रुवम् ॥
 पानाभ्यङ्गविधौ नियोजितमिदं वातादिसर्वाभयान्
 गुल्माष्टौलङ्घिरोर्तिशूलसुदरं श्वासामकासज्वरम् ।
 शोफं ब्रौह्मगुदामयं च जठरं धातुचयाभ्रानकं
 अशःकुष्ठभगन्दरं च समयेत्सर्वान् व्रणान् हन्ति च ॥
 जयति पवनरोगान् कामलां विद्विबन्धं
 दिननिशितिमिराम्यं गृध्रसीं सृग्निवातम् ।
सहचरमिति नाम्ना तैलमेतत्प्रसिद्धं
 धनपतिवृषयोग्यं भाषितं शम्भुनैव ॥

51. VIJOYĀ GUTIKĀ.

विजयागुटिका ।

पलत्रयं हरीतक्याश्चिकम् तथैव तु ।
 एलातकपत्रमुस्तानां भागोऽर्धपलिकः शृतः ॥
 व्योषं पिप्पलिमूलं च विषं च पलमात्रकम् ।
 नागकेशरचूर्णं तु कर्षं दद्याद्विचक्षणः ॥
 रेणुकार्धपलं चात्र रसस्य कर्षमेव च ।
 एतत्संभृत्य संभारं सूक्ष्मचूर्णं तु कारयेत् ॥
 गुडस्यार्धं तुलां दत्त्वादन्यां सभ्यग्विधद्वयेत् ।
 ततस्तु गुटिकाः कृत्वा तस्मात्षष्टिशतवयम् ॥
 एकैकां भक्षयेत्प्रातः कृताहारो यथावलम् ।
 मासेन पलितं हन्ति करोत्यग्निं तृतीयके ॥
 शुक्रवृद्धिं तृतीये तु बलवर्णप्रसादनम् ।
 हृन्त्यष्टादश कृहानि सप्त चैव महाक्षयान् ॥
 प्रीहानं श्वासकासी च अन्तर्वृद्धिमरीचकम् ।
 अशीतिं वातजान्नीगान्मूत्रकृच्छ्रं भगन्दूरम् ॥
 प्रमेहान्विशतिं चैव तथाऽर्शांसि गल्गुहम् ।
 सर्पन्तुताविषं हन्ति सर्वं स्थावरजङ्गमम् ॥
 योनिदोषमपक्कारमुन्मादं विषमज्वरम् ।
 वर्मेन गजतुल्योऽसौ वेगेन तुरगोपमः ॥
 मायूरस्तु भवेदग्निर्वाहाहयोव एव च ।
 चटकः स्त्रीविलासिन गृध्रदृष्टिश्च जायते ॥
 उपयोगात्परं जीवेन्नरो वर्षशतत्रयम् ।
 न चाग्ने परिहारोऽस्ति न चाध्वनि न मेथुनं ॥
 याम्यधर्मं च कुर्वाणो भोजनं च यथैच्छया ।
 विजया नाम गुटिका विख्याता रुद्रभाषिता ।
 भक्षयन्ति नरा ये तु तेषां सिद्धिर्न संशयः ॥

52. KAULJTIKĀ VARTI.

कौलीतिका वर्ति ।

पलानि विंशतिं दाव्या मूलतः संप्रकल्पयेत् ।

जले च षोडशगुणे रात्रिमेकां निधापयेत् ॥

सदावधौ काथयेत् चतुर्धाशशेषितम् ।

निःस्त्राव्य काथयेद्भूयस्त्वजाचीरेण संयुतम् ॥

पादिकेन भिषग्दद्यादवल्लह्वमागतम् ।

अप्रदग्धं तु तं कल्कं कायायां परिशेषयेत् ॥

कौलीतिका वर्तिरियं सर्वनेचरुजापहा ।

सर्वाभिष्यन्दश्मनी स्वयं प्रोक्ता पिनाकिना ॥

53. SUTA BHASMA.

सूतभस्म ।

सुतं सुशुद्धं लवणैश्चतुर्भिः क्षारैश्चिभिश्चापि विमर्दयेच्च ॥

संशोष्य पश्चादपि द्विङ्गराजिकाशुण्ठीभिरभिष्य समं विमर्दयेच्च ॥

रसेन साधं हि कुमारिकाया मूषां विदध्याद्रविधर्मं शेषिताम् ॥

तस्यां निधायाथ रसस्य गोलकं तं स्वेदितं चास्त्ररसेन सम्यक् ।

यामाष्टकेनाग्निर्कृतं दोलया पश्चाद्रसेनाभिविमर्दिताऽसौ ॥

भेकपण्यं रुद्रभृङ्गराजकैः शङ्खवेरगिरिकर्णिकारसैः ।

काकमाचीरसविभक्तिं काजकैर्धूतैर्जैरपि जयन्तिकाद्रवैः ॥

सिन्धुवारकरसेन विमर्दितं मसृणखल्वतले त्रिवासरम् ।

प्रतिरसं च विशेष्य हि भक्षयेद्भुञ्जिकाद्वयमितं रुजापहम् ॥

कैकिमाहिषवराहपित्तकैः कच्छपस्य च रसेन मर्दितम् ।

जायतेऽधिकतरं गुणेन वै सन्निपातभवमूर्च्छनं जयेत् ॥

यः श्रीसूतवरस्य सेवनमिदं नित्यं करोतीह वै

दीर्घायुर्धनधान्यधनसहितः प्राप्नोति सौख्यं सदा ।

लोके कौर्तिपरंपरां वितनुते धर्मे मतिर्जायते

प्राप्ते तस्य परा गतिर्हि नियतं सत्यं शिवेनोदितम् ॥

54. GANDHAKA TAILA PĀTANA.

गन्धकतैलपातनम् ।

कक्षांशव्योषसंयुक्तां शुद्धगन्धकचूर्णकम् ॥
 वस्त्रे वितस्निमावे तु गन्धचूर्णं सतैलकम् ।
 बिलिप्य वेष्टयित्वा च वर्ति मृतेषु वेष्टयेत् ॥
 धृत्वा संदग्धतो वर्तिमध्ये पञ्चालयेच्च ताम् ।
 विद्रुतः पतते गन्धो विन्दुशः काचभाजने ॥
 तां द्रुतिं प्रक्षिपेत्प्रवे नागवल्ग्यास्त्रिविन्दुकाम् ।
 रसं वल्लभितं तच्च दत्त्वाऽङ्गुल्या विमर्दयेत् ॥
 तत्सर्वं भक्षयेत्पश्चाद्गोधूमे चानु रंपयेत् ।
 कामस्य दीप्तिं कुरुते जयपाण्डुविनाशनम् ॥
 यङ्गुलीं नाशयेदुष्टां शूलार्तित्रासकासकम् ।
 आमाजीर्णं प्रशमयेद्भक्षुत्वं च पञ्चार्थते ॥
 गन्धकस्य गुणान् वक्तुं शक्ताः कः शब्धुना विना ।

55. VĀTANĀŚANA RASA.

वातनाशनी रसः ।

मृतं स्वर्णं ताम्रकं वज्रमेव
 लोहं ताप्यं तालकं तुल्यकं च ।
 अन्धैः फेनं शुद्धसौवीरकं हि
 कृत्वा सम्यक् सर्वभेवं समांशम् ॥
 भागं चैकं कारयेद्दे रसोभं
 वज्रचौरैर्मर्दितं तद्भिन्नैकम् ।
 बद्धा सम्यग्भूधरे तं विपाच्य
 माषं चैकं भक्षयेद्दार्द्रकेण ॥
 लिप्तादेवं पिप्पलीमाञ्चिकेण
 कृष्णामूलकाय अचानुपेयः ।
 सर्वान् वातान् वातजान् बिकारान्
 हन्याकृत्यं भाषितं भैरवेण ॥

56. TĀLAKARĀJA RASA.

तालकराजरसः ।

वङ्गं चाभं शोधितं तालकं हि सूतं शुद्धं वत्सनाभं तथेव ।
 सौवीरं चेदङ्गुणं चैव त्र्योषं वङ्गं युग्मं भागमत्रैव कुर्यात् ॥
 अभं कुर्यात्त्रिणि भागानि सम्यक् सूतं चैकं तालकं वै त्रिभागम् ।
 नागं चैकं टङ्गुणं वेदभागं सौवीराद्वै कल्पनीयौ हि भागौ ॥
 खल्वे भयं सर्वभेकव वज्रिस्त्रीरं चार्कं वासरैकं प्रयत्नात् ।
 पश्चात्क्षेप्यं काचकृष्यांहि सर्वं कूपीवक्रं ताम्रपत्रेण रुन्ध्यात् ॥
 मुद्रां कृत्वा पाच्य यामाष्टयुग्मं शीतं कृत्वा पूर्ववन्मर्दनीयम् ।
 एवं कुर्यात्त्रिणि वाराणि शुद्धं कल्कं जातं षोडशंशेन ताम्रम् ॥
 शुभं कुर्यात्सर्वरोगप्रणाशं सत्यं चैतद्भाषितं भैरवेण ।
 मेत्यं वत्सं वर्षमेतत्प्रयत्नाद्भुत्वं नो जायते सर्वकालम् ॥

57. SVARṆA SINDURA.

स्वर्णसिन्दुरम् ।

अक्षपत्रं सुवर्णस्य मुशुद्धं कोलसन्धितं ।
 शुद्धभूतं पल्लिकेन मेलयेत् यत्नतोभिषक् ।
 माईपलं गन्धकञ्च कृत्वा कज्जलिकां ततः ।
 निर्वेश्यकाचकृष्याञ्च दृढायां परिवेशयेत् ।
 तां कर्पटैश्च दात्रैव खटिकाभिः समन्ततः ।
 निरुध्यमस्यक् यत्नेन संपृज्यंशं सहोमया ।
 बालुका-यन्त्रमध्यं तां सन्निरुध्य समाहितः ।
 पञ्चे द्वादश यामांस्तु निर्व्याते च सुनिर्व्याते ।
 एकाकी पाकविद्भ्यः स्याद्दृशीतं समुद्धरेत् ।
स्वर्णसिन्दुरमित्येतत् सर्वरोग निमूदनं ।
 वातिकं पित्तिकञ्चैव श्लैष्मिकञ्च मुदाहृणं ।
 रोगं सर्वं निहन्त्यागु भक्षणाद्वातसंशयः ।
 वलायुर्वर्द्धनं सम्यक् वलीपलित नाशनं ।

अश्वरी-सूतिका-मेढ्र गर्भिणीरोगनाशनं ।
मर्त्यलोक हितार्थाय स्वयंप्रोक्तं पिनाकिना ॥

58. PURNA CANDRA RASA.

पूर्णचन्द्रो रसः ।

यदाभरुष्यलीहानि कर्षमावाप्ति चूर्णयेत् ।
सुवर्णं ताप्यकं वङ्गं ज्वरकहय पादिकं ॥
लवङ्गं मुसकश्चेव तथा विफलमेव च ।
एतच्चूर्णीकृतं सर्वं धात्री स्वरस मर्दितं ॥
भावयेत् सर्वं चूर्णानि शतावर्था रमेक्षया ।
द्विगुञ्जा फल मानेन वटीं कार्या विचक्षणैः ।
अनुपान प्रभेदेन रोगे योगं प्रकल्पयेत् ।
नित्यं स्त्रो सेवनाद् यस्तु क्षीण शुक्रो भवेन्नरः ॥
महावली महावीर्यो जायते नात्र संशयः ।
नाशयेत् प्रवलान् रोगान् प्रमेहान् अपि विंशति ।
रावणस्य हितार्थाय स्यकरोच्छङ्करः पुरा ॥
पूर्णचन्द्रो रसो नाम सर्वं रोगेषु दुर्लभः ॥

59. BHASMEŚVARA RASA.

भस्मेश्वररसः ।

एकभागं वत्सनाभं त्रिभागं म(रि)चान्वितम् ।
भस्म षोडशभागं च काननीत्पलसम्भवम् ॥
सुक्ष्मचूर्णं कृतं सर्वं नस्यं स्यात्सन्निपातशुत् ।
अथ भस्मेश्वरी नाम शम्भुना परिकल्पितम् ॥

60. ŚĪTABHANJI RASA.

शीतभञ्जोरसः ।

पारदं रसकं तालं तुल्यं गन्धकटङ्कणम् ।
सर्वभित्क्षमं शुद्धं कारवेज्या रसैर्दिनम् ॥

मर्दयेत्तेन दिव्याञ्च ताम्रपावोदरं घनम् ।
 अङ्गुलार्धार्धमानेन तत् पचेत्क्षितताम्रये ॥
 यन्त्रे यावत्स्फुटन्त्येव ग्रीह्यसस्य पृष्ठतः ।
 ततः मृशैतले ग्राह्यताम्रपावोदराङ्घ्रिः ॥
 तत्समं मरिचं दत्त्वा सर्वमेकत्र चूर्णयेत् ।
 त्रिगुञ्जं पर्णखण्डेन वातिके पैत्तिके ज्वरे ॥
 गुञ्जं कं ससितं दद्यान्निगुञ्जं व्योषयुक्तम् ।
 सन्निपाते ज्वरे दीयो वल्लैकमाद्रकद्रवैः ॥
 त्रिदिनैर्विषमं तीव्रमेकदिविचतुर्थकम् ।
 नाशयेच्छीतभञ्ज्याख्यो रसो रुद्रेण निर्मितः ॥

61. PUTRAPRADA RASA.

पुत्रप्रदो रसः ।

शुद्धसूतं ग्राहं स्वेद्यं मन्दाग्नौ दधि माहिषे ।
 वृटिते वृटिते दद्याद्दधि तुर्येऽङ्गि चोद्धरेत् ॥
 तस्मिन् खर्णं क्षिपेत्प्राञ्जशतुःषष्टितमांशकम् ।
 मर्दयेन्नित्पनीरेण यावत्तैकं हि जायते ॥
 पुनः संस्वेद्य तं सूतं वटशुद्धाह्वितजैः ।
 काकमाद्या च जीवन्त्या रसः स्यादामयुष्मकात् ॥
 दिनं शीताम्बु कुम्भस्थं दिनैकं दधि माहिषे ।
 एवं सिद्धरसाद्वल्लं प्रत्यहं ब्रह्मचर्यधृक् ॥
 मासैकं सेवते भर्ता सितादुग्धीदनप्रियः ।
 त्रिफलानिम्बकार्पासीरसैर्गौरी कमात्पृथक् ॥
 सप्त सप्त दिनान् पीत्वा पञ्चादृतुसमामग्रे ।
 रसं वल्लं ग्राहं चैकं कार्पास्यम्बुसितायुतम् ॥
 टङ्कणं तूरिका सूतं पक्काङ्गिकरसान्वितम् ।
 त्रिदिनं मधुना योनेर्लेपं शुद्धिजनं परम् ॥
 महिष्या दधिमध्यस्थं दिवा सूतं विमाषकम् ।
 कौसेवासनये रात्रौ भक्षयेद्दधिसंयुतम् ॥

रुंभीगान्ते तथा स्त्रियं यामार्घं संपुटेन च
 सर्वलक्षणसंपन्नं सुतं जनयते वरम् ॥
 तापादिकैः समुत्पन्ने दीयं द्राक्षासितादिकम् ।
 कार्यः श्रौतीपचारश्च युक्त्या भिषजा सदा ॥
 चायुर्हं हि वक्षं कान्तिं नष्टवीर्यविषवर्णम् ।
कुर्वादीनहरः पुत्रप्रदो रुद्रविनिर्मितः ॥

62. SARVVA VYĀDHIHARA.

सर्वव्याधिहरः ।

रसोपरसखीहानि धाम्नाधादिविश्रितः ।
 गन्धचययुतं सुतं मारयेत्पुटयोगतः ॥
 पथितं चक्रयन्त्रे च गन्धकेन समन्वितम् ।
 विषं कलाशकं दत्त्वा दीपनीषधिभाषितम् ॥
 पिप्पलीपविषैर्भाष्यं वटौ माषप्रमाशिका ।
 स्थातो रवीन्दुरः सुतः सन्निपातविनाशनः ॥
भिषग्भिष्य प्रदातव्यं श्रोतवान् च रोगिण्यै ।
 चमदः सर्पदष्टस्य मृतसंजीवनः परः ॥
 कामक्षेण समायुक्तः सर्वव्याधिविनाशनः ।
 नागवक्त्रविषैर्मुक्तं विना व्याधिं न सेवयेत् ।
सर्वव्याधिहरो नाम पुरा रुद्रेण भाषितः ॥

Serpent Worship.—The serpent worship existed almost in all countries in ancient times. It was especially prevalent in India, where even in the present day the cobra is held in great veneration. Its presence in a house is not always willingly disturbed and it is regarded by the inmates as the 'Vāstudeva' the god of the house. It is not killed by the Hindoos but is allowed to go elsewhere, if it proves dangerous to their safety. Śiva is represented as having snakes for his

ornaments. Three snakes twine round his body, neck and head and are represented with their heads expanded. So snake is considered to be one of the symbols of Śiva now. The gods are often represented with a canopy of five or seven cobras over them in the old cave temples. Vāsuki, the King of snakes, holds the world over his thousand hoods ; and hooded snakes are said to have shielded Nārāyaṇa by the canopy of their hoods when he lay floating on water before he created this world.

In Egypt the old papyrus records show that snakes, especially cobras, are associated with divinity and they symbolise wisdom. The great Sun-god, the giver of light, is represented as crowned with the double uræus, the two cobras supporting the sun's disc. In China the concretions of snakes find a prominent place as a therapeutic agent.

In the description of the arms of the Society of Apothecaries in "Burke's Encyclopædia of Heraldry," 1851, we find serpents in the right hand of Apollo: "In shield, Apollo, the inventor of physic, with his head radiant, holding in his left hand a bow, and in his right a serpent." In the figure of Æsculapius, reproduced in Wotton's *Chronicles of Pharmacy* from the Cassalius Collection of Medals, etc. (17th century) we find a snake encircling the god.

CHAPTER II

BHĀSKARA

In the R̥gveda, the sun is celebrated under two different names, Sūrya and Savitri. Bhāskara or the Sun is also considered as the fountain-head of all knowledge in medicine. * He is the father of the two Asvins. The idea that the Sun is a good physician, we can trace back to the R̥gveda where he is invoked for curing diseases: The Sun is dispelling disease (i. 35. 9).

And again in i. 50. 11-13: "Oh Sun! Cure the sickness of my heart and yellow colour of my body." इदरोमं मम सूर्यं हरिमाषं च नाशय R.V. इदरोमं हृदयगतं पीनं रोमं हरिमाषं शरीरगतं कान्तिहरश्चोक्ष वाह्यरोगं नाशय सूर्य—Sāyana. Again "Cure is to be prayed from the Sun"—आरोग्यं भास्करादिष्वादि—आमवाक्य। Sūrya is styled as the son of Dyaus (Rv. x. 37. 1) or Aditi (Rv. x. 88. 11; viii. 90. 11). Uṣā or the Dawn is said to be his wife (Rv. vii. 75. 5); but in Rv. vii. 78. 3, she is described as to have produced Sūrya, Yajña and Agni. He is described as golden-handed (i. 22. 5), golden-eyed (i. 35. 8), golden-tongued (vi. 71. 3), but he is yellow-haired (x. 139. 1). He moves on a golden-car, drawn by seven radiant horses (i. 115. 3, 4; vii. 60. 3; 63. 2; x. 37. 3; 49. 7). He beholds all creatures, bears testimony to the good and bad deeds of mortals (i. 50. 2, 7; vi. 51. 2, etc.), and pursues an ascending and descending path (i. 35. 2-5; vii. 45. 1), which is prepared by the Ādityas, Mitra, Aryaman and Varuṇa (i. 24. 8; vii. 60. 4; 87. 1). Puṣān is his messenger (vi. 58. 3). He is the soul of all things, stationary and moving (i. 115. 1). He vivifies men (vii. 63. 2). He is the eye of Mitra, Varuṇa and Agni

(i. 115. 1 ; vi. 51. 1 ; etc.). He upholds the sky (x. 85. 1). He is identified with Indra (viii. 82. 1, 4), Dhātri, Savitri, and Viṣṇu (x. 170. 4), and is said to be possessed of all divine attributes (viii. 60. 1).

In the *Brahmāṇḍa Purāṇa* the birth of Aśvin twins is thus described : The parents of Vivasvān (the Sun) were Kāśyapa and Dākṣāyaṇi. Viśvakarmā had a daughter, Saṅgā Devī by name. She became the wife of Vivasvān and was called Surenu for her exquisite beauty. The beautiful, young Surenu was however not satisfied with her husband for she found him too hot to approach. Still she became the mother of Vaivasvata Manu and the twins, Yamunā, a daughter, and Yama, a son. One day while in company with her lord, she felt the heat so unbearable, that she secretly gave life to her shadow which looked exactly like her own self and ordered her to remain with the Sun who should however be kept ignorant of the mystery—a promise only to be violated if the Sun insults the shadow. Surenu then went home to her father Viśvakarmā. As her father pressed her to go to the Sun again, she assumed the form of a mare, went to Uttarakuru and began to graze in the field.

The shadow in her turn gave birth to two sons—Sāvarṇa Manu and Śanaiścara, and she loved them more than her step-sons. Now it so happened that one day, Yama being enraged by her partiality to her own sons, insulted her by raising his foot against her. She in her turn blasphemed and uttered a curse “Let that leg fall away from your body.” Yama became frightened out of his wits and explained to his father what has happened, begged his pardon and prayed for the safety of his leg. The Sun meditated that there must be some secret cause of the quarrel for he knew his son to be truthful and pious. However he soothed his son and said : “My son ! it is beyond

my power to undo your mother's curse, but you need not be afraid for only some flesh of your foot would fall away." He next asked his wife about the cause of her strange behaviour towards her son, but she remained silent. Whereupon on meditation he became aware of the true cause, insulted the shadow and went out in search of his wife Surenu in the house of Viśvakarmā. The latter made him beautiful in appearance by his skill, divesting him of his superabundant heat. Then the Sun assumed the form of a horse, found out his wife in the form of a mare, walked in company and gave birth to the twins, the Nāsatya and Daśra, who are known as the Asvin twins—the famous physicians. Yama atoned for his sin and became the Religion incarnate; Vaivasvata Manu became the progenitor of the human race, Yamunā became the river, Śanaiscara formed the planet Saturn in the sky, and Sāvarna Manu became absorbed in meditation so that he may be the originator of men in the next Manvantara or creation.

In Vedic times the Sun was regarded as the custodian of the eyes. Muir says¹: "In the Atharvaveda viii. 2. 3, a man dead, or in danger of dying is addressed in these words: वातात् ते प्राणम् अविदम् सूर्याच् चक्षुरदन्तव । यत् ते मनस् त्वयितद् धारयामि सम्-
बित्स्य अक्षेर् वद जिह्वया आलपन् । 'I have obtained thy breath from the wind, thine eye from the sun; I place in thee thy soul (मनस्); have sensation in thy limbs; speak, uttering (words) with thy tongue.' Compare A. V. v. 24. 9: सूर्यश्चक्षुषाम् अविपतिः । 'Sūrya is the superintending lord of the eyes': and in A. V. xi. 8. 31: सूर्यश्चक्षुर्वातः प्राणम् पुण्यस्य वि मेजिरे ॥ 'Sūrya occupied the eye, and Vāta (the wind) the breath of Puruṣa (or man).' See also A. V. xix. 43. 2, 3. Compare further Plato, *Repub.* vi. 18, where Socrates says of the eye: πᾶν

ηλιοειδέστατον γε ομαι των περι τας αισθησεις οργανων. 'I regard it. (the eye) as of all the organs of sensation, possessing the most affinity to the sun.' Eur. Suppl. 532 f. *Οθεν δεκαστον εις το σωμα αφικετο εντανθ απηλθε, πνευμα μεν προς αιθερα, το σωμα δεσ γην.* 'But each element of the body has departed to the quarter whence it came, the breath to the æther, the body itself to the earth.' A similar idea is expressed in a verse of Goethe, which I had formerly read, and, for a copy of which, with the context, I am indebted to Professor Aufrecht. The passage occurs in the introduction to the *Farbenlehre* (Ed. 1858, Vol. xlviii, p. 5). and is as follows: 'Hierbei erinnern wir uns der alten ionischen Schule, welche mit so groszer Bedeutsamkeit immer wiederholte: nur von gleichem werde Gleiches erkannt; wie auch der Worte eines alten Mystikers, die wir in deutschen Reimen folgendermaszen ausdrücken möchten:

Wär' nicht das Auge sonnenhaft,
Wie könnten wir das Licht erblicken?
Lebt' nicht in uns des Gottes eigne Kraft,
Wie könnt' uns Göttliches entzücken?

Jene unmittelbare Verwandtschaft des Lichtes und des Auges wird niemand läugnen, aber' u.s.w."

Books:—

1. Bhāskara Saṁhitā: A treatise on medicine by Bhāskara. The work is not procurable now, but it is referred to in the *Brahmavaivarta Purāṇa*.¹

2. Jñāna Bhāskara: "Conversations between *Sūrya* and his charioteer *Aruṇa* (*Kāśyapa*) on the evils of human existence, their causes and remedies." It deals with different diseases—the result of our actions in a previous life—

¹ See foot-note, p. 7.

“The pathological descriptions are sometimes very detailed, but the method of their cure is entirely of the piacular order ; medical treatment being jealously excluded, and almost every case being represented as *duścikitsyatama*, and only to be approached by penance, sacrifices and donations to the officiating priests.”

Beginning : नमः श्रीहरयीवाय । श्रीगणेशाय । ओं नमः श्रीसूर्याय ।

आनंदयन् बुधमनःकमलं स्वभाभिः

प्रधंसयन् हजिनदुर्दिगमंतरथं ।

कल्पांतरीपचितकर्मबिलोक हेतुः

स ज्ञानभास्कर उदेतु ह्यदवरे नः ॥

संदिग्धमाने संदिग्धे संधिस्तति च वस्तूनि ।

ज्ञानमुद्गासयन्नेष जयति ज्ञानभास्करः ॥

गते मये स्वविषयानवाप्नोति ज्ञानमंडलं ।

पुरुषेऽर्काग्रसंभूते प्रविष्टे चार्कमंडलं ॥

प्रचक्ष्य शिरसा दिवं भानुमंतं कृताञ्जलिः ।

प्रश्रयावगतो भूत्वा अरुणो वाक्यमब्रवीत् ॥

MSS. —1. I. O. 2719.

2. Berl. Cat., p. 287.

3. Or. 1254 (British Museum).

Formulae attributed to Bhāskara :—

Formulae.	Author.	Books.	Page.
1. Bhāskara Lavāṇa ...	Bhāskara...	C. D.	72
		B. P. Vol. II	314
		B. K. V.	...
Bhāskara Cūrṇa ...	„	Śā. Ś.	9
Bhāskara Lavāṇa Cūrṇa ..	„	Śā. S.	123-4
9. Udārka Rāsa ..	Samkṣiptasāra of S. K. D.		53

1. BHĀSKARA LAVANA.

भास्करलवणम् ।

पिप्पली पिप्पलीमूलं धन्याककञ्जजीरकम् ।
 सैन्धवश्च विडश्चैव पतं तालीश्चैव रम् ॥
 एषां द्विपलिकान् भागान् पञ्चसीवर्षस्य च ।
 मरिचाज्जि शुण्ठीनामैकैकस्य पलं पलम् ॥
 त्वगेलि चार्धं भागे च सामुद्रात् कुड्बद्वयम् ।
 दाडिमात् कुड्बश्चैव द्वे पले चाद्यवेतसात् ॥
 एतच्चूर्णीकृतं श्लेष्मं गन्धाद्यममृतोपमम् ।
लवणं भास्करं नाम भास्करेण त्रिनिर्म्मितम् ॥
 जगतस्तु हितार्थाय वातघ्ने आमयापहम् ।
 वातगुल्मं निहन्त्येतत् वातशूलानि घानि च ।
 तक्रमस्तुसुरासीधुशक्तकाञ्जिकयोजितम् ॥
 जाङ्गलानान्तु मांसेन रसेषु विविधेषु च ।
 मन्दाग्रे वज्रतः शक्ती भवेदान्नेव पावकः ॥
 चर्शंसि यदृच्छीदोषं कुष्ठामयभगन्दरान् ।
 हृद्रोगमामदीषांश्च विविधानुदरस्थितान् ॥
 ग्रीहानमग्नीरौक्षेव त्रासकासीदरकिमीन् ॥
 विशिषतः शर्करादीन् रोगान् नामाविधांस्तथा ।
 पाण्डुरोगांश्च विविधान् नाशयत्यत्रनिर्घया ॥

BHĀSKARA CŪRNA.

भास्करचूर्णम् ।

तालीशयन्त्रिधास्त्रैभवरेविडकञ्ज कञ्जजीरकदाह
 सामुद्रं विज्जजीरकमयद्वचकं त्वक् मटी दाडिमं द्वैः ।
 विंशत्यष्टविपक्षैकचतुरवश्वेर्भास्कारीऽग्नेऽद्यवाक्यं
 गुणानामर्शोऽर्तिकासगुह्यजिठरुतत्वग्मदग्ने चवाते ॥

BHĀSKARA

BHĀSKARA LAVANA CŪṢṢA.¹

भास्करलवणचूर्णम् ।

सामुद्रलवणं चार्धमष्टकं भित्तं बुधैः ।
 पञ्चसीवर्षं लं काष्ठं विहृत्सैन्धवचान्वकम् ॥
 पिप्पली पिप्पलीमूलं कृष्णजीरकपुत्रकम् ।
 नानकैश्चरताचीश्चमलसितसकं तप्तम् ॥
 द्विकर्षमात्राख्येतानि प्रत्येकं कारयेद्बुधैः ।
 मरिचं जीरकं मिश्रिकैकं कर्षमात्रकम् ॥
 शङ्खिन्मं स्याच्चतुःकर्षं त्वनेले चार्धकार्षिके ।
 बीजपूरसेनेव भावितं सप्तवारकम् ॥
 एतच्चूर्णीकृतं सर्वं लवणं भास्करामिधम् ।
 ब्राह्मणमात्रं देयम् मसूतकसुरास्यैः ॥
 वातघ्नं क्षभवं शुष्कं ग्रीहानसुदरकयम् ।
 चर्मोसि यक्ष्णीं कुष्ठं विहृत्विषमं भगन्दरम् ॥
 शोफं शूलं त्रासकासश्चामदीषच्च हृद्गुणम् ।
 भन्दाग्निं नाशयेदितद्दीपनं पाचनं परम् ।
 सर्व्वलोकहितार्थाय भास्करेणोदितं ।

2. UDARKA RASA.

उदकीरस ।

कोलमानमगधं सुमारितं
 रक्तमक्षभवबीजसम्भवं ।
 तत्तुल्यं सुवतसुवर्षं ब्रह्मणं
 शानमानमद्य लोहचूर्णकं ॥
 मर्द्दयेदद्य कुमारिकाद्रवे—
 —रादुकी परिमितां बटीचरीत् ।
 भक्षयेन्मधुकषायुतां गयेत्
 तृतिक्कास्त्रमद माद्य दाहयेत् ॥

¹ For a translation of the formula, see Dutt's *Materia Medica of the Hindus*, pp. 86-7.

सामवायककसम्भवं गदं

हिलयाश्च सकलं जयेदध्रुवं ।

वर्ष-वृद्धि-बल-मांस-शीघ्रितं

वर्षयेदयमुदकसंश्रयकः ॥

भास्करश्च कथितो रसिधरः

सोमरोगकुलनाशनीपि सः ॥

In the R̥gveda the following hymns refer to Sūrya :—

- Rv. i. 50. 1 : The sun knows all animated creatures.
 2 : He drives away the night.
 3 : His rays observe all people.
 4 : Sun, the source of all light.
 5 : He rises before gods and men.
 6 : Sun invoked as purifier and destroyer of evil.
 7 : Sun makes the day.
 8 : Sun is borne in his car by seven horses.
 9 : He is driving in a car drawn by seven “daughters of the car.”
 10 : He is the best of all light.
 11 : Sun is prayed for to cure heart disease, हृदरोग and Harimāṇa disease or yellowness of body.
 12 : We transfer the yellowness of (our body) to Śuka and Śārikā birds, and to turmeric.
 यकेषु मे हरिमाषं रोषणाकासु दधमि ।
 चक्षी हरिद्रवेषु मे हरिमाषं जि दधसि ॥
 13 : He has destroyed my diseases.
 115. 1 : Sun, the soul of animated and inanimated creations,

- i. 115. 2 : Sun follows the Dawn.
 3 : Harits are his horses ; they spread over the world.
 4 : Night falls when these horses are unharnessed.
 5 : The Harits, when the sun is in the middle of the sky, hold his unusual splendour on one side, but cause darkness on the other side.
 6 : The Harits are prayed to absolve us from our sins.
191. 8 : The Sun is rising in the East. He destroys all the unseen (poisonous creatures) and the Jātudhānīs.
 9 : He is rising for the good of all creatures. He destroys the unseen poison.
 10 : I throw the poison in the orb of the Sun. As he does not die, so we will not die. The Sun-god, driving his horses, destroys the poison at a distance. The poison is converted into nectar.
 11 : The small bird "Sakuntika" ate the poison.
 12 : Agni has twenty one flames. They destroy the poison.
 13 : I shall recite the names of ninety nine rivers which destroy the poison.
 14 : Let twenty one peahen and seven rivers destroy the poison in the body.
 15 : The small animal mongoose will destroy the poison.
 16 : The mongoose came and said "oh Scorpion, your poison is sapless."

- iv. 13. 1 : Sun is rising.
 2 : The devas begin their works.
 3 : Seven horses carry the sun, who knows
 all living beings.
 4 : Sun's rays drive away the night.
 5 : Sun as a pillar supports the heaven. None
 can stop his journey.

- v. 40. 5 : Āsura Svarbhānu covered Sun with
 darkness.

- 6 : Indra then dispelled darkness.
 7 : Prayer of Sūrya to Atri and King Varuṇa
 for help.
 8 : Atri made eyes for Sun by mantras.
 9 : Atri's sons dispelled darkness caused by
 Svarbhānu.

45. 1 : Sun has risen after dispelling darkness.
 2 : Sun is spreading his light.
 9 : Sun, the lord of seven horses, is coming
 down and is spreading light through
 his rays.
 10 : His worshippers are drawing Sun, as he
 rides on his horses across the bright
 waters like a vessel.

59. 5 : The maruts are covering the eyes of Sun
 by rains.

- vii. 60. 1 : O Sūrya, tell us that we are to-day sinless.
 2 : Sun, the witness of men. He nourishes
 the animate and the inanimate.
 3 : The seven horses are carrying him. He
 sees all places and all animals.
 4 : Mitra, Aryamā and Varuṇa make way
 for Sun.

- x. 37. 1 : Sun, the son of sky, sees all objects.

- x. 37. 2 : The sky, days, the world, the living beings and sun rest on truth.
- 3 : Prayer to Sun to rise with his unusual splendour.
- 4 : O Sun, with your rays, remove our poverty, and destroy our sins, diseases, and bad dreams.
- 5 : You have been sent to protect the various works of the world.
- 6 : May we be long-lived, and enjoy happiness till old age.
- 7 : May we every day see you, with healthy body and surrounded by progeny. May we live for ever and see you.
- 8 : You are pleasing to all. May we see you every day with our living bodies.
- 9 : Oh yellow-haired sun ! May we see you rise every day.
- 10 : May your sight do us good and may your days and your rays, your coldness and your heat be good to us, whether we live in houses, or travel on roads.
- 11 : May all the animals, biped or quadruped, under our charge be happy ; let all animals eat, drink and be well-nourished and strong.
- 12 : Transfer our sins to those who are averse to charity and who try to injure us.
170. 1 : Prayer to Sūrya to grant long life to sacrificers. He protects all living beings and nourishes them.
- 2 : Sun is luminous, large, well-placed in the sky, and gives food to all.

- x. 170. 3 : He is the first and foremost of all luminous bodies. He conquers all, and is the giver of light. He is the very strength and energy.

4 : Your strength nourishes the whole world.

See also Nirukta, xii. 14-16.

Hymns in the R̥gveda addressed to Savitā :—

Rv. i. 22. 5 : Golden-handed (हिरण्यपाणि) Savitā is prayed for protection.

6 : Savitā absorbs water.

7 : Savitā, the distributor of riches, and illuminator of men.

8 : Savitā, the giver of riches.

35. 1 : Savitā is prayed for protection.

2 : Dispelling darkness, awakening men, he is travelling over the world in his golden car.

3 : He has two roads—upwards and downwards. He moves by two white horses.

4 : His golden car with golden yokes.

5 : The white legged horses harnessed to golden yokes are drawing his car.

6 : As the car rests on the pin of the axle, the moon and the stars rest on the sun.

7 : His rays are full of vibrations, and are life giver.

8 : Savitā, the golden-eyed.

9 : Savitā is removing diseases.

10 : He destroys Rākṣasas and Yātudhānas.

11 : His ancient paths in the sky are free from dust.

- ii. 38. 1 : He rises every day to produce the world.
 2 : The luminous, large-handed Savitā extends his hands. For him the water flows and the wind blows.
 3 : Night falls after his work is done. Then all men cease work.
 4 : Men do work when he rises again.
 5 : Mother Dawn, sent by Savitā, bestows her son Agni the main share of sacrifices.
 6 : When the Sun sets, men return home.
 7 : You have allotted trees to birds. None can injure Savitā.
 8 : Varuṇa gives shelter to all animals that move. Birds and beasts return to their abodes.
 9 : Indra, Varuṇa, Mitra, Aryamā or Rudra do not injure Sun.
 10 : Men adore him ; he protects the wives of the devas. May we be his favourite in acquiring and hoarding riches and animals.
 11 : May we get riches from Sun.
- iii. 56. 6 : Prayer to Savitā or Bhaga to send us riches thrice every day.
 7 : Mitra, Varuṇa, Earth and Sky expect riches from Sun.
62. 10 : We meditate on the adorable splendour of the divine Savitā who directs our intellect aright. This is the famous Gāyatri prayer of the Brahmins.
 12 : We pray for food and riches from Savitā and Bhaga.

- iv. 53. 1: Let the great Savitā give us riches every day.
- 2: Savitā, the Prajāpati or lord of creation wears golden armour.
- 3: He sends his rays every day for the act of creation.
- 4: Savitā, who obeys fixed laws, is the Lord of the world.
- 5: He kindly nourishes me by the three seasons—Summer, Rain and Winter.
- 6: May Sun bestow happiness on us.
- 7: May he come with the Seasons. May he give us sons and son's sons with food.
54. 1: Prayer for riches.
- 2: You produce Soma, the cause of immortality; you give us life.
- 3: Prayer to make us sinless.
- 4: He is the support of the world.
- 5: Give us house to live in. The men obey your command.
- 6: We sacrifice Soma for you thrice every day. May Indra, Earth, Sky, Sindhu and Ādityas make us happy.
- v. 81. 1: The splendour of god Savitā is beyond the power of hymns.
- 2: He whose form is the universe (विश्व), does good to the bipeds and the quadrupeds.
- 3: The other gods derive splendour and strength from Sun.
- 4: Oh Savitā, you join with the Sun's rays. You pass through nights on both sides. Be our friend by your deeds.

- v. 81. 5 : You rule the works of all creatures. You become Puṣā by your motion.
82. 1 : Prayer for riches.
 2 : None can destroy the famous riches of Savitā.
 3 : Prayer for riches from Savitā or Bhaga.
 4 : Give us progeny and riches, and drive away our bad dreams.
 5 : Remove our bad luck and send us what is good for us.
 6 : May we be sinless before Aditi.
 7 : We adore Sun, the truthful and the protector of good men.
 8 : We contemplate the adorable Sun.
 9 : He resuscitates all living beings.
- vii. 35. 8 : May Sun be peaceful to us. May water be peaceful to us.
 9 : May air be peaceful to us.
 10 : May Savitā be peaceful to us.
38. 1 : He sends his golden rays.
 2 : Kindly hear our prayers.
 3 : You protect and nourish us.
 4 : Aditi, Varuṇa, Mitra and Aryamā pray Savitā.
 5 : May goddess of speech nourish us through our cows. Ahivudhnya is mentioned as a name of Sun.
 6 : Prayers for riches. Bhaga another name of Sun.
 7 : May the Rākṣasas be injured and the chronic diseases be removed from us.
 8 : Nourish us through milk.
45. 1 : May Savitā appear with riches in hand for the good of men.

- vii. 45. 2 : Prayer to Savitā.
3 : Let Savitā send us riches.
4 : Good-tongued Savitā with riches in his hands.
149. 1 : Savitā has kept this earth steady by many appliances without any support ; he has tied down the heaven, he gets water from clouds full of water.
2 : Savitā, son of water. From him have appeared the earth, the sky, the heavens, and the worlds.
3 : The other immortal gods have appeared after him.
4 : Let the adorable Savitā come to us like a husband to his wife.
5 : We are careful for your service (nursing).
-

INDRA.

Indra is represented in the Vedas as the chief of the gods in heaven, and to him the highest divine attributes are often ascribed in the R̥gveda. But he stands in the second rank in the Purāṇas, as next to the famous triad : Bṛamhā, Viṣṇu and Maheśvara. He is the son of Kaśyapa ; his weapon is the thunderbolt made either of iron (1.80.12 ; 1.81.4) or of the bones of the sage Dadhici. His Vāhana is the elephant Airāvata and he is said to have destroyed the stone-built cities of the Asuras. He is slayer of Vṛtra in battle, though the honour is also claimed by other gods, and the recoverer of cows from the Panis. His horses are called Hari (1.10.3 ; 1.16.2 ; 1.20.2 ; 1.81.4 ; 1.167.1) and also Etāśa (1.121.13). His devotion to Soma juice is proverbial and more hymns are addressed to him than to any other gods in the Vedas. His wife is Indrāṇī, better known as Śacī (1.82.526), and his son, Jayanta. In later literature his sensuality is much dilated upon. In Mahābhārata he is said to have seduced Ahalyā, the wife of the sage Gautama, and in Rāmāyaṇa he appears to have been defeated by Megha-nāda, the son of Rāvaṇa, king of Ceylon, as a punishment for the seduction. The legend how he was compelled by the sage Cyavana to allow the Aśvins to partake of the Soma libations is related elsewhere (see Cyavana).

He learned the Science of Medicine from the Aśvins and then taught the science to Ātreya and Bharadvāja.

अग्निर्भ्यो भगवान् शक्रः प्रतिपेदे ह वैश्वलम् ।

अग्निप्रोक्तो भरद्वाजस्तस्माच्छक्रमुपाश्रयत ॥

Caraka Saṁhitā. I. i.

ब्रह्माभुत्वाऽऽयुषी वेदं प्रजापतिमभियज्ञत ।
सोऽग्निनी ती सहस्राक्ष सोऽत्रिपुमादिकाम् नूनीन् ॥

Aṣṭāṅga Hr̥daya Saṁhitā, I.

संहस्र दक्षयोरिन्द्रः कर्माण्येतानि यद्ववान् ।
आयुर्वेदं निरुहेगं ती ययाचे यचीपतिः ॥
नासत्यी सत्यस्वयेन शक्रेण किल याचितौ ।
आयुर्वेदं यथाधीतं ददतुः शतमण्यवे ॥
नासत्याश्वामधीत्येष आयुर्वेदं शतक्रतुः ।
अध्यापयामास बहुनावेय प्रमुखान् सुनीन् ॥

Bhāva Prokāśa, I. i.

In the Yayurveda xxv. 46-47 k (2 & 3), Indra is prayed for medicine and health. With reference to the healing skill of Indra, see the R̥gveda vii. 1, v. 12, as well as the Atharvaveda xiv. 2, v. 12 :—"That is the Bountiful one, who without a ligature, before the severance of the cervical cartilage, effect a union."¹

Indra is said to have entered into the womb of Diti and cut the foetus into seven pieces. See Rāmāyaṇa, I. xlv.

तस्याः शरीरविवरं प्रविशेत् पुरन्दरः ।
गर्भश्च सप्तधा राम । चिच्छेद परमात्मवान् ॥
भियमानस्ततो गर्भो बभूव शतपञ्चणा ।
कुरीद मुस्वरं राम । ततो दितिरबुध्यत ॥

Rāmāyaṇa. i. xlv, vs. 18 & 19.

In the Kuśa Jātaka, Ayúdā, wife of King Ikṣvāku, obtained from Indra a pill which promoted pregnancy. This she dissolved in water, and took a small quantity of the mixture, distributing the rest of it to her rivals.²

His disciples.—Indra is said to have taught, the sages Bhṛgu, Aṅgirā, Atri, Vaśiṣṭha, Kaśyapa, Agastya, Pulaṣṭay,

¹ Hoernle, J. R. A. S., 1906, p. 922.

² Mitra, Nepalese Buddhist Literature, p. 110.

Vāmadeva and Asita Gautama, about the Rasāyana or the Science and Art of Tonics to prolong life from the Āyurveda, which he received from the Aśvins. These formulæ, as taught by Indra, are called Aindriya Rasāyana

* * * * चायुर्वेदमन्त्रिणो मन्त्रं प्रथच्छतान् । प्रजापतिरन्विभ्याम् । * * *
अथैन्द्रसद्रायुर्वेदाद्यतमविभ्यः संक्रम्योवाचैतं सर्वमनुष्ठेयम् ।

Caraka Saṁhitā. VI. i; p. 323.

INCIDENTS OF INDRA'S LIFE.

1. He killed Śuṣṇa Asura and helped Kutsa : 1.11.7 ;
1.33.12 ; 1.51.6 ; 1.63.3 ; 1.101.2 ; 1.103.8 ; 1.121.9 ;
1.175.4 ; 2.14.5 ; 2.19.6 ; 3.31.8 ; 4.16.9-12 ; 4.30.13 ;
5.29.8 ; 6.18.8 and 13 ; 6.26.3 ; 7.19.2 ; 8.1.28 ;
8.6.14 ; 8.51.8 ; 8.53.2 ; 8.96.17 ; 10.49.3 ; 10.61.13 ;
10.99.9.
2. Killed Asura Ahi : 1.32.1.5.13-14 ; 1.61.8 ; 1.80.1 ;
1.103.2 and 7 ; 2.11.5 ; 2.12.3 ; 2.15.1 ; 4.19.9 ;
5.17.9 ; 6.18.13.
3. Killed Vṛtra Asura : 1.32.5-11 ; 1.23.11 and 13 ;
1.51.4 ; 1.54.10 ; 1.56.5-6 ; 1.57.6 ; 1.61.10-12 ;
1.80.4-7,10,12 ; 1.84.13-14 ; 1.103.2,8 ; 1.121.11 ;
2.11.18 ; 3.31.8 ; 3.32.4 ; 5.17.8 ; 7.19.5 ; 8.8.19 ;
8.6.16 ; 8.15.3 ; 8.32.26 ; 10.48.8 ; 10.49.6 ; 10.113.8.
4. Killed Pani and helped Aṅgiras : 1.32.11-12 ; 1.51.3 ;
1.62.2-3 ; 1.101.5 ; 6.33.2.
5. Killed Pipru Asura and helped R̥gīśvāna, son of Uśija :
1.51.5 ; 1.101.2 ; 1.103.8 ; 2.14.5 ; 4.16.13 ; 6.18.8 ;
8.32.2 ; 8.49.10 ; 10.99.11 ; 10.138.3.
6. • Killed Śamvara, son of Kulitara and helped Divodāsa :
1.51.6 ; 1.54.6 ; 1.101.2 ; 1.103.8 ; 2.12.11 ; 2.14.6 ;
• 2.19.6 ; 4.16.13 ; 4.30.20 ; 6.26.3 ; 6.31.4 ; 6.43.1 ;
6.47.21 ; 7.18.20.

7. Killed Arbuda: 1.51.6; 2.11.20; 2.14.4; 4.30.14; 8.3.19.
8. Killed Arya and Citraratha (4.30.18), Urana (2.14.4), Aśna (2.14.5), Aśusa (2.19.6), Krivi (2.22.2), Savara (6.18.8) and Ili's soldiers (1.33.12).
9. Killed Namuci (1.53.7; 2.14.5; 7.19.5), Rauhini (1.103.2), Kuthava (1.103.8), Dāsa (7.19.2), Kujava (1.104.3-5; 7.19.2), Aju (1.104.4; 2.19.6; 6.31.3), Drbhika (2.14.3), Rudhrika (2.14.5), Varci's son (2.14.6; 4.30.15), Mṛgaya (4.16.13; 8.3.19), Tugra and Vetsu (6.26.4); Varti Dāsa (6.47.21) and sons of Vṛcivān, son of Varaśikha (6.27.4-5).
10. Killed 6,066 sons of Anu and Druhyus (7.18.14), Bheda (7.18.19), Divaka, son of Manyamān (7.18.19), Śrinda and Anarśani (8.32.2), Ahiśu (8.32.2 and 26; 8.77.2), Aurnabābha (8.32.26; 8.77.2), Parṇaya and Karandha (10.48.8), Navavāstava and Vṛhadratha (10.49.6), Nṛsadad's son (10.61.13), Visvarupa, son of Tvaṣṭā for Tritā (10.8.9) and his own father (4.18.12; Taitt. 5.6.1.3.6).
11. Killed Karañja and Parṇaya for king Atithigva (Dibodāsa): 1.53.8; 6.18.13; 8.53.2.
 - „ Vaṅgrda for King Ṛgiśvāna: 1.53.8.
 - „ Kṛṣṇa's pregnant wives for King Ṛgiśvāna: 1.101.1; 1.130.8.
 - „ 20 kings and 60,099 soldiers for King Suśravā: 1.53.9 and 10.
 - „ Surya, son of Svaśva for King Sudāsa and Etaśa: 1.61.15; 2.19.5; 5.29.15; 8.1.11; 8.50.9.
 - „ Amhā Asura for king Sudāsa: 1.63.7.

Killed Kavi, son of Cayamāna for king Sudāsa : 7.18.8.

„ Kujabāca for King Duryyoṇi : 1.174.7.

„ Cumuri and Dhuni for King Dabhiṭi : 2.15.4
and 9 ; 6.18.8 ; 6.26.6 ; 7.19.4 ; 10.113.9.

„ Vyāmsa Asura : 4.18.9.

Drowned Śauta, Kavasa, Vridhu and Druhyu : 7.18.12.

12. Opened the caves of Vala Asura and

Saved the Devas : 1.11.5 ; 6.18.5 ; 8.14.8.

„ Kutsa : 1.33.14 ; 1.106.6 ; 8.1.11.

„ Daśadyu : 1.33.14.

„ Śvitṛā's son from drowning : 1.33.15.

„ Praskanna : 8.3.9.

„ Atri, Vimada and Aṅgirā : 1.51.3.

„ Ruśam, Svāvaka and Kṛpa : 8.3.12 ; 8.4.2.

„ Rumaśa : 8.4.2.

„ Kings Narya and Turviti of Varya Dynasty :
1.54.6.

„ Kings Turvaśu and Jadu : 1.54.6 ; 1.174.9 ;
4.30.17 ; 8.4.1 ; 10.49.8.

„ Sage Turviti from drowning : 1.61.11.

„ blind and lame Parāvṛga and made him see
and walk : 2.13.12 ; 2.15.7.

„ Agastya for cows, Aṁśu for riches and Sau-
bhari for food : 8.5.26.

„ Adhigru (8.12.2) ; Tryasdasyu (8.36.7 ; 8.41.10),
Dirghanakha (8.50.10).

13. Helped King Āyutta (6.18.13), Āyu (8.53.2), Uśana
(10.99.9), Parāvṛtta, son of Agru (4.30.16), Tur-
vajāna (Divodāsa-Sāyana) (1.53.10).

Gave young Vṛcasā as wife to old King Kaksivāna :
1.51.13.

„ riches to Kanva, (8.49.10, 8.50.10), Paktha
(8.49.10), Daśavraja (8.49.10 ; 8.50.9) and
Gośarpha (8.49.10 ; 8.50.10).

Gave the house of son of Anu to Trtsu, 7.18.13.

„ Parābat's riches to Śarabha 8.100.6. Placed
Atithigva's son in Gungui country (10.48.8).

14. Made Kutsa, Atithigva and Āyu subject to Suśravā:
1.53.10.

„ Turvasu and Jadu obedient to king Sudāsa :
7.19.8.

„ Trtsu give his all to Sudāsa, grandson of Deva-
jana, son of Pijavana, 7.18.15.

„ Turvaśa obedient to King Sṛñjaya : 6.27.7.

„ Bṛcivats „ „ Devarāts : 6.27.7.

„ Tugra and Sruadvi obedient to king Kutsa :
10.49.4.

„ Veśa obedient to King Āyū : 10.49.5.

„ Śatgr̥bhi obedient to King Savya : 10.49.5.

„ Sudāsa and Turvasa friends : 7.18.6 ; 7.19.8.

15. He became Menā, daughter of King Vṛṣaṇaśca
(1.51.13). Drinks Soma from Sāryāta (1.51.12).

16. He became Vaikunṭha Indra, the son of Vikulā,
as she prayed for a son like him (10.47).

In the R̥gveda the following hymns are addressed to
Indra :

1 :	3 : 4.5.6.	169-170.	69.
	4-5.	173-178.	72.
	7-11.	2 : 11-22.	7 : 18-32.
	16.	36 : 1 and 5.	41 : 1.
	28-33.	41-43.	55 : 3.
	51-56.	3 : 30-54.	82-85.
	61-63.	4 : 16-32.	93-94.
	80-84.	5 : 29-40.	97-99 : 4-6.
	100-104.	6 : 17-29.	
	121.	32-47.	104. { 1-8.
	129-133.	60.	104. { 13-22.
			24.
	165.	68.	8 ; 1-4.

	10 : 8	102-105.
12-17	19-6	111-113.
21	22-24	116.
24	27-29	119-120.
32-34	32-33	131.
36-40	38	133-134.
45-46	42-44	138.
49-55	47-50	144.
59	54-55	147-148.
61-66	86	152-153.
68-70	89	160-161.
76-82	93, 8	167.
88-93	96	177.
95-100	99	180.

In the following hymns Indra is invoked with other gods :

Indra and Varuṇa : 1.2.9 ; 1.17 ; 4.41 ; 4.42 ; 6.68 ; 7.82-85 ; 8.59.

Indra and Vāyu : 1.2.4-6 ; 4.46 ; 4.47.

„ „ Maruts : 1.6 ; 1.100 ; 1.101.

„ „ Agni : 1.21 ; 1.108-109 ; 3.12 ; 5.86 ; 6.59-6.60 ; 7.93-94.

„ „ Viṣṇu : 1.156 ; 6.68-69. 7.99.4-6.

„ „ Vṛhaspati : 4.49 ; 4.50 ; 7.97-98.

„ „ Puṣā : 6.57.

„ „ Soma : 6.72 ; 7.104 ; 8.1.

„ „ Vāstospati : 7.55.

The following hymns refer to the skill of Indra as a physician :

1.53.11 : Prayer to Indra for beautiful son and long life.

1.54.11 : „ „ „ „ „ „ food.

1.104.6 & 8 „ „ not to destroy embryo and infants.

1.165.15	} : Prayer to Indra for long life, strength and good food.
1.169.8	
1.175	
1.176.6	
1.177.5	
1.178.5	

4.11.6: Prayer to Indra for long life and power of procreation.

6.24.10: Prayer to Indra for long life (100 years), with sons and grandsons.

6.39.5: Prayer to Indra for water, herbs, non-poisonous trees, cows, horses and men.

8.1.12: Indra sutured the torn parts in the neck before the blood oozed out and even without any styptics.

8.40.12: Let Indra and Agni nourish us through the three humours (त्रिधातुः)।

8.91: Apalā's prayer to Indra to remedy her baldness, etc.

10.161: Prayer to Indra to cure consumption.

R̥gveda, X. 161 Hymn :

God—Indra. R̥ṣi—Destruction of Phthisis.

1. O patient! I am releasing you from the unknown disease Phthisis, and Rāja Yakṣmā (King of Phthisis). Then you will live. O Indra and Agni! if the patient is under the influence of any evil planet, release him from such influence.

2. Even if this patients' span of life is shortened; or even if he is dead or is in a moribund condition, still I am bringing him back to life from Nir̥ṛti, the god of death, I have so touched him that he will live for one hundred years.

3. The oblation that I give, has one hundred eyes which grant one hundred years of life. I have brought him back by such oblations. May Indra protect him from all sins and grant him life for one hundred years.

4. O patient! Live for one hundred autumns, one hundred winters with ease and happiness, and one hundred springs. May Indra, Agni, Savitā and Vṛshaspati, satisfied with the oblations, grant him life for one hundred years.

5. O patient! I have hold on you. I have brought you round, you have returned rehabilitated. I have recovered your limbs, eyes and entire life.

The following epithets are applied to Indra in the R̥gveda :

Īśvara (1.26; 1.173.9; 6.23.10); Śatakratu (1.4.8-9; 1.5.8; 1.10.1; 1.16.9; 1.30.6 and 15; 1.51.2; 1.105.8); Sukratu (1.5.6); Suhantta Vajra (7.30.2); Sunāsika (1.9.3; 1.29.2; 1.81.4); Haryyaśva (3.31.3); Vṛtrahā (1.16.8); Maghavan (1.33.12 and 15; 1.102.7 1.133.3; 1.165.9); Meṣa (1.51.1; 1.52.1); Asura (1.54.3; 1.174.1); Suśipra (1.101.10); Medhyātithi (8.1.30); Puruhuta (1.176.3; 6.23.8); Īśāna (1.75.4); Purandara (6.32.3); and Sṛṅga-
viṣa's son (8.17.13).

Formulae ascribed to Indra :—

Formulae.	Authors.	Books.	Pages
1. Aindriya Rasāyana, I,	Suramaṇi	... C. S. VI, I.	323
2. " " II,	"	... " "	326
3. Sarvvato Bhadra ...	Surendra	... R. S. 8	406
4. Daśmūlādya Taila ...	Purandara	... G. N.	67
5. Haritaki Avalaha ...	"	"	115

1. AINDRIYA RASĀYANA, No. I.

ऐन्द्रिय रसायनम् ।

तद्वत्त्वा—ऐन्द्रो ब्राह्मी पयसा चौरपुष्पी श्रावची महाश्रावची शतावरी विहारी
जीवनी पुनर्नवा भाववला स्थिरा वचा च्छातिच्छा मीदा महामीदा जीवनीवाशान्वाः
पयसा प्रवृत्ताः । वत्सासात् परमायुर्वयस तद्वत्त्वमनामयत्वं स्मरवर्षसम्पदमुपचयं
मेषां कृतिमुत्तमवल्गमिष्टाशपराण् भावानावहन्ति सिद्धाः ॥

इतीन्द्रोक्तं रसायनम् ।

2. AINDRIYA RASĀYANA, No. II.

ऐन्द्रिय रसायनम् ।

वस्त्राणां जीवनीयानां इक्षवीवानां च वा दम् ।

ववसः स्नापनानाञ्छदिरस्यासमस्य च ॥

क्षुब्धराणां मधूकानां मुलानामुत्पलस्य च ।

क्षवीकानां विहङ्गानां वचायाश्चिकस्य च ॥

शतावरीयाः पयसासाः पिप्पल्या जीवकस्य च ।

क्षुब्धानां भाववत्त्वाश्च हरिद्राया धवस्य च ॥

विफलाकाशकाय्याश्च विदाय्याश्चन्दनस्य च ।

इक्षुचां शरयूखानां श्रीपथ्यांतिनिग्रस्य च ॥

रसाः दृषक् दृषक् शान्नाः पलाशचार एव च ।

एषां पलोन्मितान् भानान् पयो गन्धं चतुर्गुणम् ॥

हे पात्रे तिष्ठतैस्तस्य हे च गन्धस्य सर्पिणः ।

तत् सार्धं सर्वमैकत्र मुसिहं केचिदुद्धरीत् ॥

तथामलकचूर्णानामादकं श्रवमावितम् ।

स्मरसेनेव दातव्यं चैद्रस्यभिभवस्य च ॥

शर्कराचूर्णपात्रञ्च प्रत्यमैकं प्रदापयेत् ।

तुनाचीर्ष्याः सपिप्पल्याः स्नाप्यं संसृष्ट्वैतच्च तत् ॥

इक्षु चैनापि के कुक्षे मासार्धं हृतमाविते ।

मागमश्चिह्नमां तस्य तव कष्टं प्रयोजयेत् ॥

देवतात्वप्रवासानामयसः कटिकस्य च ।
 मुक्तावेद्व्यंशज्ञानां चूर्वाणां रजतस्य च ॥
 प्रक्षिप्य पीकृषीं नाचां विहावायासमैद्युनम् ।
 जीर्णं जीर्णं च मुञ्जीत वटिकं चीरसर्पिणा ॥
 सर्वरोगप्रघ्ननं उच्चमायुष्यमुत्तमम् ।
 सत्वव्युतिशरीराग्निमुञ्जीन्द्रियवत्प्रदम् ॥
 परमुज्ज्वलरखेव वर्यस्वरकां तथा ।
 विहास्योप्रघ्ननं सर्ववायोमतप्रदम् ॥
 सिद्धार्थताडामिनं वयस्य प्रजाप्रियवत्प्र वयस्य लोके ।
 प्रवीज्यमिच्छन्निरिदं यथावद्रसायनं ब्राह्ममुदारवीर्यम् ॥
इतीन्द्रोक्तप्रसाधनमपरम् ।

3. SARVVATO BHADRA.

सर्वतोभद्रः ।

सूरं गन्धं तपनमगन्धं कामलोदस्य चूर्णम् ।
 कृत्वेकस्मिन् द्रव्यदि पिबितं शङ्खवेरस्य वारा ।
 बुध्याद्रोगे यज्जति बुद्धये त्रीनिसर्वज्वरेषु ।
 शोथे पाण्डू निमिज्जतगदे सर्वतः कामलायां ।
 काशे चाश्वे च मेहे जठरज्वरगदे सर्वदीपप्रभृते ।
 क्ष्मातो योमः सुरमचिह्नतः सर्वरोगैकहन्ता ॥

4. DAŚAMŪLĀDYA TAILA.

दशमूलस्य तैलम् ।

दशाङ्गुलैश्चरारिष्टमाञ्जीपाठाकटुचिकैः ।
 शठीपुनर्गन्धमागीशुरसाभुक्कसमिकैः ॥
 यक्षपुष्पीत्वमेलाकं मुनिवाहपपह्वयैः ।
 चण्डोटवद्वत्तकोतमिरीयकटभीकसैः ॥
 कनिष्ठसूत्रमन्याकसर्पपामरदावभिः ।
 म्रियदुहितुमसिष्टासुसुखातमुञ्जीयसैः

गिरिकर्षीवचाकुष्ठकङ्कुष्ठरजनीदयेः ।
 मधूकसारसिन्धुसितनीलोत्पलाम्बुदेः ॥
 कटुतेलं समैरिभिः पक्वं चौरि चतुर्गुणे ।
 सोम्यादं हृन्त्यपेक्षां पानाभ्यञ्जनमावनेः ॥
 डाकिनोभूतवेतालनैगमेवादिकान् यद्भान् ।
 कृत्याभिचाररक्षांसि नाशयत्यखिलान्यपि ॥
 तैलमेतत्सुरेन्द्रेण नन्दस्य कथितं पुरा ।
 वालस्य किल रक्षार्थं विचोरमिततेजसः ॥
 अथैव सर्वगावाणि भोक्ताव्यं रिपुवैश्रमि ।
 तैलमभ्यञ्जनं श्रेष्ठं वसतोऽरातिसङ्घटे ॥
 अथ विलिप्तभंगा भगशालिनी यदि रमेत नरं दिवसे शुभे ।
 मदनसायकजर्जरितोरसो भवति तस्य तयाऽपहृतं मनः ॥
 तान् लसुखवासेषु व्यञ्जनाहारयोगतः ।
 अनामिकायसंयुक्तं वशीकरणमुत्तमम् ॥

5. HARĪTAKĪ AVALEHA.

हरीतक्यवलेहः ।

भार्गोजटापलशतं सलिलार्मण्याभ्यां
 युक्तं च मूलतुलया सङ्घितं विपाच्य ।
 पादस्थिते तु शतमम हरीतकीनां
 पक्ताव्यसृज्यलगुडस्य शतेन सार्धम् ॥
 उपार्थं तत्र शिशिरं मधुनः पलानि
 चत्वारि च त्रिगुणितानि पलत्रयं च ।
 व्योषं दटित्वगिभकैसरपत्रकाशा-
 नेषां पलं खण्ड्य निधेयमधीपयुज्य ॥
 श्रावं सकाशमपि शोषमन्नातिहिक्का-
 मेकाङ्गिकं अरमपीनसमुत्कटं च ।
 हन्वाद्रसायनमिदं हि पुरन्दरस्य
 प्रीतं सङ्घकारपुत्रमिदं वराभ्याम् ॥

KĀRTIKEYA.

God Kārtikeya, son of Goddess Pārvatī is said to have written a work on medicine called Vāhaṭagrantha. This is a "treatise dealing with the methods of diagnosing diseases and with the preparation of different kinds of medicines for curing them. It is said to have been revealed by God Subrahmanya, son of Goddess Parvatī."

MSS. : No. 13176-7, G.O.M.L. (Madras).

Begins :—

वागीशायास्तुमनसः * तं नमामि गजाननम् ॥

* * *

अस्य श्रीपार्वतीयस्य प्रियसुनुर्गुणोन्नतः ।

अग्नौ रचिते चैव वाहटग्रन्थस्तुतमम् ॥

वेद्यानां यशसीऽर्थाय व्याधितानां हिताय च ।

धत्ते चन्वत्तरिप्रोक्तं तमस्तुर्विदये यथा ॥

Colophon :

इति—श्रीमरीरूपककार्तिकेयविरचिते वाहटग्रन्थे निदानयोगो नाम प्रबन्धः
परिच्छेदः ॥

The MS. No. 13177 contains the following Chapters :—

- | | |
|---------------------|----------------------------|
| १ । निदान योगः । | ६ । श्लेष्मवर्ग समाप्तिः । |
| २ । कषाय योगः । | ७ । पृथ्वीवटक योगः । |
| ३ । पित्तापच योगः । | ८ । जीवघ्नयोगः । |
| ४ । तैलयोगः । | ९ । रसयोगः । |
| ५ । घृतयोगः । | |

SARASVATI.

Sarasvatī, the goddess of learning in later literature, is not of very great importance in the R̥gveda. She is celebrated both as a river and as a goddess (तत्र सरस्वती इति एतस्य नदीवद्देवतावच्च निगमा भवति । Yāska. Nir. ii. 23). Sāyaṇa also refers to the dual nature of the deity (द्विविधा हि सरस्वती विवद्वद्देवता नदीवद्या च). As a river see R̥gveda i. 3. 12.; vi. 52. 6; 61. 2. 8. 10. 13; vii. 36. 6; 95. 1; x. 17. 10. 1.—(Vaj. S. 4. 2; Atharva Veda vi. 51. 2); 30. 12; 64. 9; 75. 5. The river Sarasvatī, which is now a narrow stream losing its way in the Rajputana desert, is described in vii. 95. 2, as a mighty river rising from the Himalayas and falling down into the sea. King Citra and others are said to have dwelt on or near the Sarasvatī. As a goddess she is said to be the consort of Sarasvān Deva (vii. 96. 4-6) and is invoked for wives and offspring, also for plenty and protection. [See also v. 43. 11; vi. 49. 7; 61. 11.] She is described as white in colour (vii. 95. 6; 96. 2.). From her two prolific breasts, which are said to be truth and falsehood (Ait. Br., iv. 1), the worshippers suck prosperity and riches (i. 89. 3; 164. 49). As a river nymph, she is further described as a support and a fortress (vii. 95. 1), and as bestowing wealth, fatness, and fertility (vii. 95. 2). See also ii. 41. 16; vi. 61. 14. In vi. 61. 1, she is represented as having given to Vadhryaśva a son, Divodāsa by name. (See also i. 3. 10. 11; 89. 3; 164. 49; ii. 3. 8; 30. 8; vi. 49. 7; 61. 3. 4. 7; viii. 21. 17; ix. 67. 32; x. 17. 8. 9). She is described as the receptacle of all the powers of life and the bestower of offspring (ii. 41. 17); and in

184. 2, she is associated with the deities who assist regeneration (वर्मं षडि सरस्वती).

"In R̥gveda x. 131. 5 (= Vāj. S. x. 34) where the Aśvins are said to have defended Indra, Sarasvatī is declared to have waited upon him. And in Vāj. S. xix. 12 it is said: 'The gods celebrated a healing sacrifice; the Aśvins, physicians, and Sarasvatī too a physician, through speech communicated vigour to Indra.' The Aśvins and Sarasvatī are also connected with each other in Vāj. S. xix. 12, 15, 18, 34, 80-83, 88-90, 93-95; xx. 56-69, 73-76, 90. In xix. 94, it is said that 'Sarasvatī, wife of the Aśvins, holds a well-formed embryo in her womb.'¹

In the R̥gveda she is not identified with Vāch, who is said to be the wife of Indra (ii. 8. 8. 4), but in the later mythologies she became the goddess of learning, speech and eloquence and the spouse of Brahmā, and is invoked as a muse. As goddess of learning, her reputation is shared by two other goddesses; and according to Sāyaṇa,² Bhārati is the goddess of learning in heaven, Ilā is the terrestrial goddess, and Sarasvatī, the goddess of the aerial regions. Sarasvatī is identified with Agni, and the three goddesses Ilā, Sarasvatī and Bhārati refer to Agni (i. 13. 9; 142. 9; 118. 8; ii. 1. 11). In the Mahābhārata (Sāntiparva, v. 12920) she is called the mother of the Vedas, and in v. 6811, the celestial goddess is described as produced from heaven. In Taitt. Br., ii. 8. 8. 5. she is said to be the wife of Indra and to be the deity sought after by the R̥ṣis who composed the Vedic hymns.

¹ Muir's Texts, Vol. V, p. 342.

² "भरतः आदित्यः । तस्य सन्धिनी भारति । तादृशीयुर्वीर्यदेवता । ई । इति सुदेवः । ई सरस्वति । सरीवाक् सद्वक् वा तदति चक्षुर्वीर्यदेवता ।"

Sāyaṇa : Commentary, i. 188. 8.

Formulæ attributed to Sarasvatī :—

1. Sārasvat Ghr̥ta : an oleogenous medicine to cure sterility in women and seminal insufficiency in men.

अप्रजानां च नारीणां नराणां स्त्र्यरितसां ।

वृत्तं सारस्वतं नाम सारस्वत्या विनिर्मितं ॥

End of Maṇḍūkabrahmikalpa.

G.O.M.L. xxiii, No. 13184.

2. Sārasvat Ghr̥ta : In the Bower MSS., p. 39, a formula for the clarified butter of Sarasvatī is given. By its use, a man attains memory and intelligence. It cures stammering and dumbness.

SĀRASVAT GHṚTA.

सारस्वतम् वृत्तम् ।

आजम् पयः शङ्खवेरम् वचा त्रियुर्हरीतकी ।

पिप्पल्यो मरिचम् पाठा सैन्धवदशमम् वृत्तम् ॥

शङ्खवेरादयो भागा खवणन्ताः पक्षीनखाः ।

चतुर्धुं चैव पयसा वृत्तमस्थं विपाचयेत् ॥

अस्योपयोमाहिष्येत रश्मिन् मेधाश्च मानवः ।

यङ्गदग्दग्मूत्रं पानादेवास्त्रशाम्यति ॥

The following hymns are addressed to Sarasvatī in the R̥gveda

i. 3. 10 : May S̥arasvatī, the purifier, like our sacrifices.

11 : Sarasvatī, the generator of true words and the teacher of pious men, hath accepted our offerings.

- 12 : Sarasvatī as she flows hath produced a copious flood and has stimulated all knowledge.
13. 9 : May Ilā, Sarasvatī and Mahī, the three goddesses take their seats on the Kuśa grass.
89. 3 : May the gracious Sarasvatī bestow riches and happiness on us.
142. 9 : May Hotrā, Bhārati, Ilā, Sarasvatī, and Mahī sit on the Kuśa grass.
164. 49 : Her two prolific breasts are said to be the source of all prosperity, riches and happiness.
188. 8 : Prayer to Bhārati, Sarasvatī and Ilā for prosperity.
- ii. 1. 11 : Hotrā, Bhārati, Ilā and Sarasvatī, the slayer of Vṛtra, are identified with Agni.
3. 8 : May Sarasvatī, Ilā and Bhārati remain in our sacrificial altar, perfect our hymns and preserve the sacrifices.
30. 8 : O Sarasvatī ! protect us. With the help of Maruts conquer our enemies. Indra killed the chief of the proud Śandikās.
32. 8 : Sarasvatī is prayed for with the goddesses Sinivālī, Rākā, Guṅgu for procreation, and Indrāṇi and Varuṇāṇi for protection.
41. 16 : Prayer to Sarasvatī : She is the best of mothers, best of rivers and best of goddesses.
- 17 : O Sarasvatī ! you are resplendent. Food is dependent on you. You feel happy by drinking Soma juice from the Śunahotras. O Goddess ! grant us offspring.
- 18 : O Sarasvatī, the source of food and water ! accept the oblations of the Gr̥tsamādas.
- iii. 4. 8 : May Bhārati, Ilā and Sarasvatī with the Sārasvatas sit on the Kuśa grass.

54. 13 : May Maruts and Sarasvatī hear our prayers and grant us progeny.
- v. 5. 8 : May Ilā, Sarasvatī and Mahī sit on the Kuṣa grass.
42. 12 : May the rivers, Sarasvatī and divine Rākā desire to bestow riches on us.
43. 11 : May the goddess Sarasvatī come down from the sky to our sacrifice. May she be pleased with our hymns, and may she send us rain.
- vi. 49. 7 : May the beautiful heroine Sarasvatī, the purifier, and of wondrous gait, perfect our sacrifice. May she be pleased to give her worshippers a strongly built house and happiness.
52. 6 : May Indra and watery Sarasvatī be near us for our protection.
61. 1 : She gave Vadhryaśva a son and killed Pani.
2 : She is breaking the bases of mountains with her torrents.
3 : You have killed the son of Vṛṣaya and other haters of gods.
4 : May she satisfy us with food and riches.
61. 5 : You save men who wage war for riches, if they pray you.
6 : Protect us in war and like Puṣṣ, bestow riches on us.
7 : May the terrible sarasvatī in her golden chariot desire to hear our prayer.
8 : Her powerful torrents flow with sound.
9 : May she conquer our enemies and bring her watery sisters.
10 : May we always adore Sarasvatī with her seven sisters.

- 11 : She fills the terrestrial and aerial regions with her radiance; may she protect us from our culminators.
- 12 : May she be fit for prayer in every war.
- 13 : She is the swiftest of all rivers, she is the object of adoration by the wise.
- 14 : O Sarasvatī ! lead us to riches. Do not make us mean. Do not harass us with floods. Accept our friendship and our house. May we be not removed from you to strange regions.
- vii. 35. 11 : May Sarasvatī grant us peace.
36. 6 : Sindhu, the mother of rivers, and the seventh river Sarasvatī, swollen with water, are flowing.
95. 1 : Sarasvatī, full of water, is running freely.
- 2 : She runs from mountain to ocean, bestowing wealth and fertility; she gave Nahuṣa butter and milk.
- 3 : Sārasvān, grants his worshippers powerful sons and rehabilitates their bodies.
- 4 : She is rich and always kind to her friends. May she hear our songs in the sacrifice.
- 5 : May we be united with you for protection.
- 6 : O white Goddess ! bestow on the worshippers food, and rear us with your benediction.
96. 1 : O Vasiṣṭha ! sing songs in prayer to Sarasvatī.
- 2 : O white Sarasvatī ! men get food and riches from you.
- 3 : May she do us good and stimulate our intellect.

- 4 : We want wife and sons ; we adore Sārasvān Deva.
- 5 : O Sārasvān ! protect us by your water.
- 6 : May we get sons and food from him.
- viii. 21. 17 : Has Indra given me these riches ? Has the fortunate Sarasvatī given me ? Or O Citra ! you have given me.
- 18 : King Citra who lived on the banks of Sarasvatī gave us enormous riches.
- ix. 5. 8 : May Bhārati, Sarasvatī and Ilā come at the sacrifice.
67. 32 : He who reads these *ślokas* gets from Sarasvatī clarified butter, milk and water.
81. 4 : May the well-formed Sarasvatī come here with Puṣā, Mitra, Varuṇa, Maruts, and Aśvins.
- x. 19. 7 : May Sarasvatī fulfil the desires of the charitable men.
- 8 : Sarasvatī drives with our forefathers in the same chariot. May she grant us food and freedom from disease.
- 9 : May you bestow the worshipper food and riches in large quantities.
- 10 : The waters are like our mother, may the water cleanse us. I am coming out of the water pure and free from sin.
30. 12 : O Waters ! complete this beneficial sacrifice. Be the protector of sons and riches. May Sarasvatī grant food to the poet.
64. 9 : May Sarasvatī, Sarayu and Sindhu rivers come to protect us. Like mothers, may these goddesses give us water, sweet as honey, and unctuous and nourishing as clarified butter.

65. 1: Sarasvatī is mentioned with other gods, Indra, Varuṇa, Rudra, Viṣṇu, etc., as united together.
- 13: May Sarasvatī, with whom are linked various ideas and thoughts, hear my words.
75. 5: O Ganges! O Yamunā, Sarasvatī, Śatadru (Sutlej) and Paruṣṇī (Irāvati)! divide among yourselves the psalms uttered by me.
110. 8: May Bhārati, Ilā and Sarasvatī come and sit on the Kuṣa grass.
131. 5: Sarasvatī is said to have waited upon Indra (Vaj. S. x. 34) when he was rescued by Aśvins.
141. 5: Pray Aryyamā, Indra, Viṣṇu, and Sarasvatī for food.
184. 2: O Sinivālī, O Sarasvatī! hold the embryo. May Aśvins produce a foetus.
-

RĀKĀ, SINIVĀLĪ, GUṆGŪ, AND ANUMATI.

Rākā (ii. 32. 4. 5. 8; v. 42. 12), **Sinivālī** (ii. 32. 6; x. 184. 2), **Guṇḡ** (whom Sāyaṇa, in ii. 32. 8. identifies with **Kuhū**) and **Anumati** are four goddesses, besides **Sarasvatī**, mentioned in the **Ṛgveda** in connection with medicine. "Sāyaṇa says : **Rākā** is the full moon (ii. 32. 4) but she is closely connected with parturition, as she is asked to 'sew the work' (apparently the formation of the embryo) 'with an unfailing needle,' and to bestow a son with abundant wealth (ii. 32. 4). **Sinivālī** and **Kuhū** are (as we are told by Yāska, Nir. xi. 31) wives of the gods according to the mythologists (*nairuktāḥ*) and the two nights of the new moon (*amāvāsye*) according to the ritualists (*यज्ञिकाः*). **Sinivālī** being the earlier, and **Kuhū** the later. **Sinivālī** however is also connected with parturition, being called वृधुट्का, 'the broad-loined' (or 'bushy-haired'), बहुव्री, 'the prolific,' सुबाहु, 'the handsome-armed,' स्वहृदि, "the handsome-fingered," being supplicated for progeny ii. 32. 6. 7 (प्रजाम् देवी दिदिष्टि नः), and asked to bestow pregnancy, x. 184, 2 (गर्भम् धेहि सिनिवाली); A. V. v. 25. 3; vi. 11. 3. Yāska quotes from the *Taitt. Br.*, iii. 3. 11, a verse regarding **Kuhū**, whose name does not occur in the *Rig-veda*. See also the account of **Anumati** in Böhtlingk and Roth's *Lexicon*, s.v." ¹

"In a hymn to **Anumati** (according to Professor Roth the goddess of good will, as well as of procreation), A. V. vii. 20, she is thus identified with all things (verse 6) : 'Anumati was all this universe, whatever stands or walks, and everything that moves. May we, O goddess,

¹ Muir Texts, Vol. V, p. 346. See also Weber's *Ind. Stud.*, v. 226 ff and 227.

RAKĀ, SINIVĀLI, GUṆGU, AND ANUMATI 121

enjoy thy benevolence; for thou, Anumati, dost favour us."

The following hymns in the R̥gveda are addressed to the goddesses :

ii. 32. 4 : May auspicious Rākā hear. May she sew her work with an infallible needle, and grant us wealthy and heroic sons.

5 : May gracious Rākā approach us to-day. She nourishes us with thousand blessings.

6 : Wide-hipped Sinivālī, the sister of the gods, grant us progeny. (= Y.V., 34. 10).

7 : Sinivālī is said to have beautiful arms, nice fingers, many children, and to have delivered many women easily.

8 : I invoke Guṅgu, Sinivālī, Rākā, Sarasvatī ;
Indrāṇī and Varuṇāṇī for welfare.

42. 12 : See p. 116.

184. 2 : See p. 119.

CHAPTER III

DAKṢA

Dakṣa sprang from Aditi, and Aditi came forth from Dakṣa. After her the gods came into being, (x. 72. 4. 5). Certain luminous gods are said to be the sons or descendants of Dakṣa, (vi. 50. 2). Roth (Illus. of Nirukta, p. 51) interprets Dakṣa as the spiritual force and Aditi as the spaces. Dakṣa's wife is Prasuti, the mother of Satī who married Śiva. Dakṣa celebrated the famous sacrifice, the Dakṣa-Yajña, in which all the gods except Śiva were invited. To punish her father, Satī went to the sacrifice, and when Dakṣa proceeded with his Yajña without Śiva, she gave up her life. To avenge her death, Śiva sent Virbhadrā; and a struggle ensued, in which Dakṣa's head was severed from his body. It was afterwards substituted by a goat's head, when Śiva's wrath was pacified by prayer. The sacrifice was completed with a share assigned to Śiva. In iii. 27. 10, Ilā is the daughter of Dakṣa; she married Rudra.

Dakṣa is called the Prajāpati, *i. e.*, the creator of living beings. He is one of the Ādityas (ii. 27. 1) who were six (ii. 27. 1) or seven (ix. 114) or eight (x. 72. 8) in number in the R̥gveda but more in later literature (Śatap. Br., ii. 6. 3. 8; Mbh., Ādiparva, 121). Brahmā taught him the Science of Medicine. Dakṣa was the teacher of the two Aśvins, the twin sons of the sun.

ब्रह्मा प्रोवाच ततः प्रजापतिरधिजने तच्चादश्निवावश्चिभ्यामिन्द्र इन्द्रादहं मया लिङ्गं
प्रददयमर्धिव्यः प्रजाहितहेतोः ।

Suśruta Saṁhitā, I. i.

ब्रह्मा स्वत्वायुषी वेदं प्रजापतिमजियहत् ।

सोऽश्निनी तौ सङ्ख्याचं सोऽग्निपुत्रादिकान् मुनीन् ॥

Aṣṭāṅga Hṛdaya Saṁhitā, I. i.

विधाताऽयच्च सर्वस्वमायुष्येदं प्रकाशयन् ।

खणाद्या संहितां चक्रे लक्षश्लोकमयीं वृजुम् ।

ततः प्रजापतिं दक्षं दक्षं सकल कर्म्मसु ॥

विधिर्धौनौरधिं साङ्गनायुर्वेदमुपदिशत् ॥

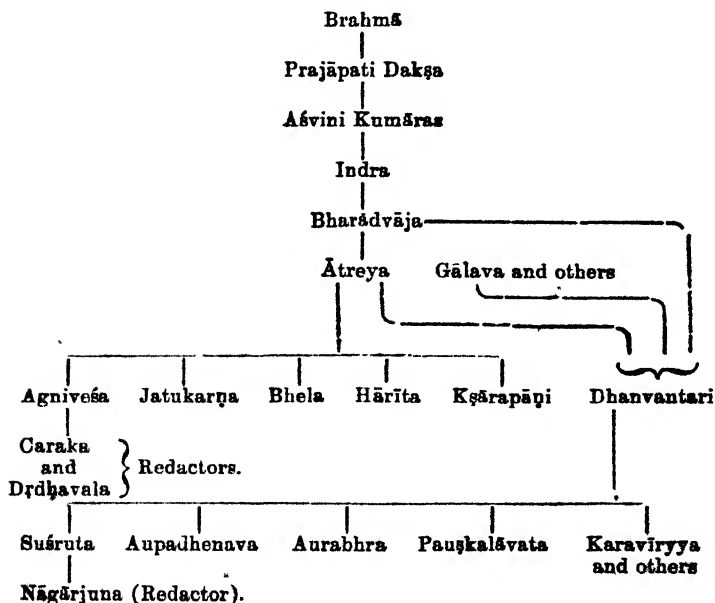
अथ दक्षः-क्रियादक्षः स्वर्ध्वं वीरमायुषः ।

वेदयामास विद्वांसौ सूर्यांशौ सुरसत्तमी ॥

Bhāva Prakāśa, I. i.

See also Caraka Saṁhitā, I. i.

GENEALOGY OF THE TEACHERS OF MEDICINE.



The resemblance of Æsculapius (the reputed son of Apollo) and his two sons Machaon and Podalarius, to Dakṣa, the preceptor of the two Aśvins, the offspring of the sun, who after learning the Āyurveda from their father became the medical attendants of the gods, is no doubt very remarkable.

Formulae attributed to Dakṣa :—

I. Mahārāśnādikvātha—Prajāpati—B. P., II, ii, p. 587.

1. MAHĀRĀŚNĀDI KVĀTHA.

महाराक्षादि काथः ।

राक्षावातारिमूलश्च वासकश्च दुरालभम् ।
 सटीदारुवलासुसनागरातिविषाभयाः ।
 शदंष्ट्राव्याधिघातश्च मिसिधान्यपुनर्नवाः ।
 चक्षुगन्धामृताक्लृप्ता हृद्ददारशतावरी ।
 वचा सहचरश्चैव चविकाहृत्तौहयम् ।
 समभागान्वितैरितै राक्षादिगुणभागिकैः ।
 कषायं पाययेत् सिद्धमष्टभागावशेषितम् ।
 शुक्लीचूर्णसमायुक्तमाभायेन युतं तथा ।
 अलम्बुषादिसंयुक्तमजमोदादिसंयुतम् ।
 यथादोषं यथाव्याधिं प्रक्षेपं कारयेत् भिषक् ।
 सर्वेषु वातरोगेषु सन्धिमज्जगतेषु च ।
 श्वानाह्वेषु च सर्वेषु सर्वंगावनुकम्पते ।
 कुजकै वामने चैव पक्षाघाते तथाद्विते ।
 जानुजङ्घास्थिपीडासु गृध्रस्थां च हनुगृहे ।
 प्रशस्तं वातरक्ते स्याद्रूक्षस्थे तथार्शसि ।
 विश्वचौगुणहृद्दोगविसृचौक्रौष्ट्रगोषिके ।
 अश्वहृत्तौ स्त्रीपदे च योनिशुक्रामये तथा ।
 पुंसां सिद्धगते रोगे स्त्रीणां बन्ध्यामये तथा ।
 योषितां गर्भदं सुख्यं नास्ति किञ्चिदतः परम् ।
 सर्वेषां पाचनानां श्रेष्ठमेतद्धि पाचनम् ।
 महाराक्षादिकं नाम प्रजापतिविनिर्मितम् ॥

इति महाराक्षादि काथः ।

YAMA

Yama or the Indian Pluto in the Veda is the god and ruler of the dead. He is the son of Vivasvat (Rv., ix. 113. 8; x. 14. 1 (=Av., viii. 2. 11; xviii. 1. 49); x. 14. 5; 58. 1; 60. 10) and Saranyū, the immortal daughter of Tvaṣṭa (Rv., x. 17. 1. 2). He is said to have been one of the original pair of human beings (x. 10. 2) and to have sprung from the Gandharva, a deity of the atmosphere, and his wife Āpyāyoni (x. 10. 4). In the same hymn to perpetuate the human race, his twin sister is said to have requested him for cohabitation. But he is declared to have resisted the solicitations of his twin sister Yami or Yamunā to form a sexual union with her for the continuation of the species (Roth, Journ. German Orient. Soc., iii. 335; iv. 426; Illustr. of Nirukta, p. 138). He was the first of mortals who died and discovered the way to the other world; he guides other men thither, and assembles them in a home for ever (x. 14. 1. 2; Av., vi. 28, 3; xviii. 1. 49: 50; 3. 13). In the Taitt. S., vi. 1. 4. 3, it is said: "The gods and Yama contended in this world. Yama took away the vigour and energy of the gods. This is his characteristic. The gods reflected, 'Yama has become the same as we are.' Müller thinks that Yama's character is solar. Sun also is the son of Vivasvat and like Yama he is sometimes considered as sending death (Rv., viii. 67. 20: see also Av., xix. 9. 7; xviii. 3, 62); he is sometimes spoken of as preserving from Yama (Rv., i. 116. 2; vii. 33. 9; ix. 68. 3. 5; x. 12. 6; 13. 2. 4; 53. 3; 64. 3; 123. 6). In Śatap. Brāhma., 109, Yama is identified with the sun (xiv, 1, 3, 4); but he is, a little further on (xiv, 2, 2, 11) similarly identified with Vāyu.

Max Müller understands Vivasvat to represent the sky, Saranyu the dawn, Yama originally the day, and Yami, the twin sister, the night. They are identified by some with the first human pair; and another hymn says that he "was the first of man that died." He had two dogs as his messengers (Av., v. 30. 6; viii. 1. 9; 2. 11; 8. 10); one of them is said to be black and the other spotted (x. 14. 10-12). In i. 29. 3, his two female messengers are referred to, and Indra is prayed to cast them asleep. In x. 165. 4 and Av., vi. 28. 3, Yama is identified with death and a bird is said to be the herald of approaching death of animals.

In the R̥gveda Yama is nowhere represented as the punisher of the wicked, an idea very much dilated upon in later times. But his insatiable dogs are no doubt objects of terror, and in x. 97. 16, deliverance is prayed from the bonds of Yama and Varuṇa.

In the Mahābhārata he is the son of Sun by Samjñā, and the brother of Vaivasvata Manu, and mythologically, the father of Yudhiṣṭhira. He is the judge of the dead. For the Pauranic legend of Yama and his step-mother Chāyā, see page 84.

In the Vedic hymns, Yama is never said to have been a physician. He sends death and is the King of the departed. In his abode, the virtuous enjoy blessedness after death.

According to Barnouf, the powerful King Jamsid, Ferudin and Garsaspa as mentioned by the celebrated Persian poet Firdusi are the same as Yim, Thratayana and Keresaspa of the Zend Avesta; and these names are again to be traced to the R̥gvedic gods: Yama, Traitana and

Books—

Jñānārṇava : Yamarāja is said to have written a book on medicine called Jñānārṇava (or the Sea of

Knowledge). It is mentioned in the *Brahmavaivarta Purāṇa*. There is also a *Dharma Sāstra* which bears the name of Yama as its author.

Hymns relating to Yama in the *R̥gveda* :—

x. 10, 1-14; 14, 1-16 (=Av., xviii. 1, 49; Nir. x. 20) 15. 1. (=V.S., 19. 49; Nir., 11. 18); 17. 12.

x. 10. 1-14: The famous hymn by Yama and his sister Yamī in the form of a dialogue about cohabitation between brothers and sisters.

14. 1. Adore Yama, the son of Vivasvān. He takes the pious to the happy land. All men go to him.
2. Yama points out the way in which our forefathers went.
3. Yama is magnified by the help of the *Āṅgirās* as Indra by the *Kavyas*.
4. O Yama! take your seat with the *Āṅgirās* in this sacrifice.
5. Come with the *Āṅgirās*. We invoke Vivasvat, your father.
6. Our forefathers *Āṅgirā*, *Atharvans* and *Bhṛgu* have come; may they bless us.
7. You go to the way of our forefathers; go to King Yama and *Varuṇa*.
8. Go to heaven and live in the company of our forefathers and Yama. Leave evil there and return home.
9. Yama has fixed this cremation ground for the dead.
10. Pass by the two dogs in haste and live in company of the fathers and Yama.
11. O Yama, protect this dead man from your dogs who guard the way. O King! make him fortunate and free from disease.

12. Those two insatiable messengers have big noses ;
may they give us strength : may we see
the sun.
 13. Prepare Soma for Yama, and for him make
oblations. The sacrifice goes towards him.
 14. Adore Yama ; may he grant us long life.
 15. Offer oblations for Yama. We adore the sages
who showed us the right path.
 16. Yama gets Trikadrūka sacrifices.
 17. 1 : The god Tvastā gave her daughter in marriage.
When Yama's mother was married, the wife
of Vivasvān disappeared.
 2. The immortal Saranyu was concealed from men,
and a lady like her was given to Vivasvān ;
she conceived the two Ásvins ; and Saranyu
gave birth to twins.
-

VARUṆA.

Varuṇa, the son of Aditi (i, 24, 15), the god of the ocean in later mythology, is not so described in the R̥gveda. He rather occupies a more conspicuous place but his connection with water can distinctly be traced in the Vedic literature (R̥v., i, 161, 14; ii, 28, 5; vii, 49, 2-4; 64, 2; viii, 41, *8; 58, 12; ix, 90, 2; V. S., x, 7; Av., iii, 2, 3; iv, 115, 12; 16, 3; v, 24, 4; vii, 83, 1). He is frequently associated with Mitra in the hymns of the R̥gveda as the ruler of earth and skies (v, 62, 3; 63, 7; 67, 5; 69, 1, 4; vii, 61, 4; x, 102, 2); as the guardians of the world (ii, 27, 4; v, 62, 9; vii, 51, 2; viii, 25, 1; x, 126, 4); as martial gods (i, 25, 5; 124, 6; 136, 1; v, 66, 2; 67, 1; 68, 1, 3; vi, 49, 1; 51, 10; 67, 5, 6; viii, 84, 11; 64, 2; viii, 25, 8; 56, 1; 90, 2); as Rudra, the terrible (v, 70, 2, 37); as Asura, the divine (viii, 25, 14; 27, 20; 36, 2; vii, 65, 2); and as the universal monarch (i, 71, 9; 136, 14; 137, 1; v, 62, 6; 63, 2, 3, 5; 65, 2; 68, 2; vii, 64, 2; viii, 23, 30; 25, 4, 7, 8; 90, 2; x, 65, 5). They are described as the righteous (i, 2, 8; 23, 15; 36, 4; ii, 27, 4; v, 63, 1; 65, 2; 67, 4; vii, 64, 2; 66, 13; viii, 23, 30; 25, 8), the lords of truth (i, 23, 5) and haters of falsehood (i, 152, 1; ii, 27, 4; vii, 60, 5; 66, 13). They discharge the rain (v, 62, 3), cause the sky to shine (x, 65, 5) and help the foolish to be wise (vii, 60, 6, 7).

Varuṇa is also separately magnified many times, (ii, 27; 28; v, 85; vii, 86; viii, 27, 7; 41; 42, 1-2; x, 61, 26), but Mitra only once (iii, 59). Sāyaṇa expresses the opinion that Mitra is the god of the day (i, 89, 3) and Varuṇa is the setting sun (vii, 87, 1;—Sāyaṇa¹) or the god of the night

¹ मेरुं च चरति युवतेः युवते च वाचसी रात्री ।

Sāyaṇa.

(Taitt. Br., i, 7, 10; Taitt. Sam., i, 18, 16; ii, 1, 7, 4; vi, 4, 8). According to Śatapatha Br., this earth is Mitra and the heaven is Varuṇa. The Vedic Mitra is identified with the Mithra (Windischman) and the Asura Varuṇa with the Ahura Mazda (Roth) or Varena (Westergaard) of the Zend Avesta. The Varuṇa corresponds in name to the Uranos of the Greeks.

Varuṇa is sometimes said to be visible to the worshippers (i, 25, 18; vii, 88, 2) in this world, and in the next he and Yama shall be beheld by the pious after death (x, 14, 7). He is said to be the highest god of the Aryan races (Jour. Germ. Or. Soc., vi, 71)

The far sighted (i, 25, 5, 16; viii, 90, 2), thousand-eyed (vii, 34, 10) Varuṇa lived in a house which had thousand doors (vii, 88, 5) and thousand columns (ii, 41, 5; v, 62, 6). Dressed in golden mail (i, 25, 13), and seated in his chariot drawn by horses (v, 62, 8), Varuṇa beholds * all things around him (v, 62, 4, 8; 63, 1). His golden-winged messengers (i, 25; x, 123, 6) behold both worlds (i, 24, 13; vi, 67, 5; vii, 87, 13). The sun-eyed (vii, 66, 10; 61, 1; 63, 1; x, 37, 1) and beautiful-handed god is the King or King of kings (i, 24, 7, 8; 25, 10; ii, 27, 10; 28, 1, 6; iv, 1, 2; v, 40, 7; 85, 1, 3; vi, 68, 9; vii, 42, 1; 64, 1; 87, 6; x, 103, 9; 132, 4; 173, 5). He is the source of knowledge and dwells everywhere as a ruler (v, 85, 2; vi, 70, 1; vii, 86, 1; 87, 5, 6; viii, 41, 4, 5, 10; 42, 1; 87, 5). Wind is his breath (vii, 87, 2). Rivers flow by his command (i, 24, 8; ii, 28, 4; vii, 87, 1). The moon and stars obey him (i, 24, 10) and he opens out paths for the sun (vii, 70, 4). He knows the flight of birds in sky, the path of ships in ocean, and the course of wind (i, 25, 7), but he is unknown to birds and the rivers (i, 24, 6). His laws are fixed (i, 25, 6, 10; 44, 14; 141, 9; ii, 1, 4; 28, 8; iii, 54, 18; viii, 25, 2). He instructs

Vasiṣṭha in mysteries (vii, 87, 4), who claims his friendship (viii, 88, 4), implores his forgiveness and entreats for his life. He is the possessor of divine wisdom or *māyā* (iii, 61, 7; v, 63, 3, 4, 7; vi, 48, 14; *vii, 28, 4; x, 99, 10; 147, 5).

Varuṇa is said to have a hundred, a thousand medicines as remedial agents (i, 24, 9), and he is the guardian of immortality (viii, 42, 2). He is prayed for to drive away evil and sin (i, 24, 9; v, 85, 7, 8), to prolong life (i, 24, 11; 25, 12) and spare the lives of transgressors of his laws (i, 25, 1), though they are liable to punishment by his noose (i, 24, 5; 25, 21; vi, 74, 4; vii, 65, 3; 84, 2; x, 85, 24; Av., iv, 16, 6). "From dire disease preserve us free" is the prayer of the Vedic Rṣi to Varuṇa. It is said that he, who constantly sings the hymn 'Uduttamaṁ Varuṇa pāśam' never suffers from any disease. He gets himself cured of disease, if he recites this sāma :

उदुत्तमं वरुणपानिर्व्रजेत् सदा प्रयुञ्जानः सन्नाथं न निगच्छति निगतश्च प्रमुच्यते ।

Sāmavidhāna Brāhmaṇa, II. I.

Ea or Oannes was the earliest (5,000 B. C.) known Sumerian deity associated with the art of healing. He was called the "Lord of the Deep." "He arose from the sea and instructed the people in science and learning." As god of the sea, he is credited with certain healing powers, from which the sick may derive benefit by bathing in the sea. His son Marduck, the chief Babylonian deity of healing was believed to give health and to punish men with disease through the medium of the heavenly bodies. He is said to afflict the guilty with dropsy. The following verses refer to the power of the god to inflict disease on the guilty and to restore the dead to life :

"O Marduck, thou art glorious among great gods,
No will is greater than thine,

*Thou canst inflict upon the guilty one
 A dropsy which no incantation can cure,
 Thou art the marvellous one who taketh pleasure
 In raising the dead to life (i.e., the healing of the sick)
 Marvellous one who hath power to give life
 By thy spells the sick are restored."*

In the *R̥gveda*, i, 24, Varuṇa is described as giver of long life. In vii, 86-89, the short final hymn alludes to the power of Varuṇa to cure dropsy. Varuṇa as a water-god inflicts on man dropsy as a punishment for their sin. (*Cf.* the story of Dogstail Śunaśepa, wherein King Hariścandra is said to have been attacked with the disease.)

The idea that dropsy was caused by the wrath of Varuṇa might have originated from the common belief still prevalent in India, and once fully believed in England, that "dropsy could be caused by drinking too much water and that a patient suffering from dropsy contracted the distemper by drinking too much water."¹

The following epithets are applied to Varuṇa in the *R̥gveda* :

Asura (i, 24, 14 ; ii, 28, 7 ; 27, 10 ; iv, 63, 3, 7 ; v, 85, 5).

Praceta (i, 24, 14).

Āditya (v. 69, 4).

Rudra (v. 70, 2).

Sukṣatra (vii, 89, 1-4).

Deva (vii, 60, 52 ; 61, 7 ; viii, 42, 3).

Rājā (vii, 89, 1).

Kṣatriya (vii, 64, 2).

¹ B. M. J., 1888, Vol. II, p. 1275-6.

In the following hymns Varuna is invoked with other god in the R̥gveda :

Indra and Varuṇa : see p. 105.

Mitra and Varuṇa : i, 129, 3 ; 136 ; 137 ; 151 ; 152 ; 153 ; iii, 62, 16-18 ; v, 41, 1 ; 52, 14 ; 62 ; 63-72 ; vi, 67 ; vii, 40, 2 ; 50, 1 ; 52, 2 ; 60, 5-12 ; 61 ; 62 ; 63, 5, 6 ; 64 ; 65 ; 66, 1-13 ; viii, 29, 9, 10 ; 47, 1 ; 101 ; x, 61, 25 ; 132.

THE AŚVINI KUMĀRA.

In the *R̥gveda* the Aśvins are described as the twin sons of Vivasvat and Saranyu (x, 17. 2). They are also called the sons of sky (i. 7, 12 ; 84, 1 ; 182, 1 ; x. 61, 4) or the offspring of the ocean (i, 46, 2). Uṣā is their sister (i, 180, 2) and Urjāni (i, 119, 2) or Sūryā, the daughter of the sun, their wife (i, 116. 17 ; 117, 13 ; 118, 5 ; 119, 5 ; iv, 40. 6 ; v, 73, 5 ; vi, 63, 5 ; 68, 3 ; 69, 3, 8 ; vii, 68, 3 ; 69, 4 ; viii, 8, 10 ; 35 ; x, 39, 11 ; etc). They are named conjointly Nāsatya (i, 116, 1, 2, 4, 9, 10, 11, 14, 17, 19, 20, 23) and Dasra ;—but these names in later times became the names of the two Aśvins respectively. Now who were these Aśvins? Yāska, the oldest commentator, in the *Nirukta*, thus remarks :—

तत् की अश्विनी । द्यावा पृथिवी इति एकै । अहोरात्री इति एकै । सूर्यचन्द्र
मसौ इति एकै । राजानीषु व्यकृती इति ऐतिहासिकाः । तयोः काल ऊर्ध्वसूराणात्
प्रकाशितव्यस्य अनुविष्टमनु ।

“Next in order are the deities whose sphere is the heaven ; of these the Aśvins are the first to arrive. They are called Aśvins because they pervade everything, the one with moisture and the other with light. Aurnabhāva says they are called Aśvins, from the horses. Who then are those Aśvins? ‘Heaven and earth’ say some ; ‘Day and Night’ say others ; ‘The Sun and Moon’ say others ; ‘Two Kings, performers of holy acts’ say the legendary writers. Their time is subsequent to mid-night, whilst the manifestation of light is delayed. The dark portion denotes the intermediate (god=Indra?), the light portion Āditya (the Sun).”¹

Roth following the remarks of Yāska, identifies the two Aśvins with Indra and the Sun ; but this identification is

¹ Muir : *Sanskrit Texts*, Vol. V., p. 234.

unwarranted for Durgā the commentator on Yāska never attributes to the latter the view which Prof. Roth ascribes to him.

The Aśvins are long armed (i, 3, 1), swift handed (i, 3, 2) gods who are ever young (vii, 67, 10; 69, 8) and know no old age (i, 112, 9; 116, 20). They are powerful gods (i, 3, 2) who go to all directions (i, 4, 6, 14), perform various deeds (i, 3, 2), and know everything (i, 120, 2). They are of terrific paths (i, 3, 3) and for them the R̥bhus made a car which goes everywhere (i, 20, 3; x, 39, 12). This golden car (i, 92, 18; 129, 4; v, 75, 3; 77, 3; viii, 5, 29) was triangular in shape (i, 34, 12; 47, 2), and had three wheels (i, 34, 2, 5, 9, viii, 8, 23) and three columns (i, 34, 2; 47, 2; 118, 1, 2; 157, 3). It was drawn by horses (i, 116, 17; 118, 5; 119, 1, 5; 17, 6; 158, 3; 180, 6; iii, 50, 2-3; iv, 45, 4-7; vii, 69, 1; viii, 5, 7) who were called Hari (i, 181, 5) or by asses (i, 34, 9; 116, 2; Nighantu, I, 14) which were whipped (i, 22, 3); sometimes the car was drawn without any horse (i, 112, 12; 120, 10) or with Gangetic porpoise and ass (i, 116, 18). They had a ship with a hundred oars (i, 116, 5). They are the gods of cure (i, 92, 18; viii, 8, 19) and they know the earthly, the aerial, and the heavenly medicines (i, 34, 6). They performed many wonderful cures which are related elsewhere. They drink soma for pleasure (i, 46, 12) and sound conchshell as they travel in their car.

In some passages in the R̥gveda the Aśvins, like the R̥bhus, are described as men ऋषी (i, 3, 2; 180, 4; 182, 8). Evidently they were men, skilled in surgery and horsemanship. Goldstucker takes the same view and I quote his remarks from Muir's Sanskrit Texts, Vol. V., p. 255.

"The myth of the Aśvins is, in my opinion, one of the class of myths in which two distinct elements, the

cosmical and the human or historical, have gradually become blended into one..... The historical or human element in it, I believe, is represented by those legends which refer to the wonderful cures effected by the *Aśvins*, the cosmical element is that relating to their luminous nature. The link which connects both seems to be the mysteriousness of the nature and effects of the phenomena of light, and of the healing art at a remote antiquity. That there might have been some horsemen or warriors of great renown who inspired their contemporaries with awe by their wonderful deeds, and more especially by their medical skill, appears to have been the opinion of some old commentators mentioned by *Yāska*, for some 'legendary writers' he says, took them for 'two kings, performers of holy acts;' and this view seems likewise borne out by the legend in which it is narrated that the gods refused the *Aśvins* admittance to a sacrifice on the ground that they had been on too familiar terms with men."

I may add that the cures performed by the *Aśvins* as described in the *R̥gveda* do not always partake of a supernatural character; those cures can be performed by mortal surgeons. Many of the deeds attributed to them are of the more ordinary of medical practice. As regards the myth of their birth, developed in later times, see *Bhāskara*. (Also *Rv.*, 10, 7, 2).

The *Aśvins* bear some resemblance to *Chiron* the Centaur who was very famous for his knowledge of medicine. The herb which healed *Chiron's* wounds bore the name of *Centaury* after him. Like the *Aśvins*, he is said to have taught his knowledge of simples to *Aesculapius*, to *Hercules*, to *Aristes* and other Greek heroes. The Centaurs were the wild inhabitants of Thessaly. They were skilful horse tamers and riders, and from this *Chiron*

is said to have the form of half man and half horse. We think that the legend of Saranyu and Vivasvat who assumed the form of horses might have similar origin. Max Müller expresses the same opinion: "The legend of the Saranyu and Vivasvat assuming the form of horses may be meant simply as an explanation of the name of their children, the Aśvins."¹

The Aśvin twins bear some physical resemblance to Castor and Pollux, 'the two handsome, beautiful young men that ride upon white horses.' They are the twin sons of Jupiter and Leda. She was the wife of Tyndarus, King of Laconia, whom Jupiter loved. Castor was a horse tamer, and Polydeuces (Lat. Pollux), the master of the art of boxing. Like the Aśvins they fought many battles, but they had no knowledge of medicine.

In the recent excavations at Boghaz Koyi in Cappadocia in North-Western Mesopotamia, Winckler discovered in certain documents in cuneiform character names of four Vedic gods, *viz.*, Mitra, Varuṇa, Indra and Nāsatyas or the Aśvins, among other gods worshipped by the Kings of Mitani in the Euphrates Valley about 1600 B.C. It is possible that "these tribes, being neighbours and perhaps subjects of Vedic tribes who had reached a higher level of civilization, adopted the Vedic gods, and thus brought the Vedic worship with them to their new homes in Mesopotamia".² It is said that even the Mitanian Kings coined their names from the ancient Vedic language.³ In the Zend Avesta Nāsatya assumes the name Nauṇghaithya.

¹ Science of Language (1882), Vol. II, p. 530.

² J. R. A. S., p. 726, 1909.

³ Roger : History of Babylon, Vol. I, p. 110.

INCIDENTS OF THEIR LIFE.

The following legends are mentioned in the R̥gveda :—

(1) When the sage Cyavana became old and decrepit, he was restored to youth and beauty, and was made acceptable to his young wife Sukanyā, daughter of Śaryyāti (i, 116, 10 ; 117, 13 ; 118, 6 ; v, 74, 5 ; vii, 68, 6 ; 71, 5 ; x, 39, 4).

(2) They restored Viṣṇāpu to his father Viśvakāya, the son of Kṛṣṇa (i, 116, 23 ; 117, 7 ; vii, 86, 3 ; viii, 86 ; x, 65, 12).

(3) They rendered the old Kali young who gained his wife (i, 112, 15 ; x, 39, 8).

(4) They brought to Vimada, the bride Kamadyū, also called Śundhyuva, the beautiful daughter of Purumitra (i, 112, 9 ; 116, 1 ; 117, 20 ; x, 39, 7 ; 65, 12).

(5) They favoured Bhujyu, son of King Tugra and bore him home on their ships when he was left in the middle of the sea (i, 112, 6, 20 ; 116, 3, 4, 5 ; 117, 14, 15 ; 118, 6 ; 119, 4, 8 ; 158, 3 ; 180, 5 ; 182, 5-7 ; vi, 62, 6 ; vii, 68, 7 ; 69, 7 ; viii, 5, 22 ; x, 39, 4 ; 40, 7 ; 65, 12 ; 143, 5).

(6) When Viśpalā's leg was severed in battle, they substituted an iron leg instead (i, 112, 10 ; 116, 15 ; 117, 11 ; 118, 8 ; x, 39, 8).

(7) They cured R̥jraśva of his blindness, inflicted as a punishment by his father (i, 112, 8 ; 116, 16 ; 117, 17 ; 120, 6).

(8) They restored Parāvr̥ja, who was blind and lame, to sight and power of locomotion (i, 112, 8).

(9) They raised and revived the R̥ṣi Reva who was bound and drowned in a well (i, 112, 5 ; 116, 24 ; 117, 4, 12 ; 118, 6 ; 119, 6 ; x, 39, 9).

(10) Vandana was raised by them out of a pit and restored by them to youth from decrepitude (i, 112, 5 ; 116, 11 ; 117, 5 ; 118, 6 ; 119, 6, 7 ; x, 39, 8).

(11) They bestowed wisdom on Kakṣivān, of the Prajra dynasty, made him young and caused wine and honey to flow forth from their horses' hoofs (i, 116, 7 ; 117, 6 ; x, 143, 1).

(12) Delivered Atri and his companions from a gloomy abyss, where they were thrown by evil spirits (i, 112, 7, 16 ; 116, 8 ; 117, 3 ; 118, 7 ; 119, 6 ; 180, 4 ; v, 78, 4 ; vii, 71, 5 ; viii, 5, 25 ; 73, 3, 78 ; x, 39, 9, 40, 7) ; and gave him food and made him young (x, 147, 1).

(13) In response to Vadhrimati's invocations, they gave her a son called Hiraṇyahasta and delivered her with ease (i, 116, 13 ; 117, 24 ; vi, 62, 1 ; x, 39, 7 ; 65, 12).

(14) They cured princess Ghoṣā, the daughter of Kākṣivāna, of her leprosy and gave her a husband even when she became an old maiden (i, 117, 7, 19 ; x, 39, 3, 6 ; 40, 5, 9). Her son Suhasti praised them (i, 120, 5).

(15) They caused the cow of Śāyu, who had left off bearing, to yield milk. (i, 112, 3 ; 116, 22 ; 117, 20 ; 118, 8 ; 119, 6 ; vi, 60, 7 ; vii, 68, 8 ; x, 39, 13).

(16) They gave Pedu a swift white horse which overcame his enemies (i, 116, 6 ; 117, 9 ; 118, 9 ; 119, 10 ; vii, 71, 5 ; x, 39, 10).

(17) They helped Indra (x, 131, 5) and other persons (i, 112 ; 116 ; 117 ; 118 ; 119) and rescued from the jaws of a wolf a quail (i, 112, 8 ; 116, 14 ; 117, 16 ; 118, 8 ; x, 39, 13).

(18) They cured Kakṣivat of blindness and deafness (i, 116, 120;) and sage Śroṇa of his weak knees (i, 112, 8).

(19)* The Aśvins also gave sight to Kaṇva (i, 117, 8; 118, 7; viii, 8, 20), and the power of hearing to the son of Nṛṣada (i, 11, 7, 8).

(20) Delivered Vāmadeva from his mother's womb (i, 119, 7).

(21) They killed the son of Viṣṇā Asura with poisoned arrow (i, 117, 16); with Indra killed Pṛthuśravā's enemy (i, 116, 21); killed Śamvara for Divodāsa (i, 112, 14); also killed Pani (i, 184, 2).

(22) Saved Rājarsi Antaka, Karkandhu, Vayya (i, 112, 6), Pṛṣaṅgi, Purukutsa (i, 112, 7), Kutsa, Naryya, Śrutaryya (i, 112, 9; *x, 40, 6), Veśa, son of Aśva (i, 112, 10), Kākṣivān, son of Uśija (i, 112, 11) Māndhātā (i, 112, 13), Bharadvāja (i, 112, 13; 117, 11), Vamra, Pṛthi who was without horse (i, 112, 15), Śayu (i, 112, 16; vii, 68, 8), Manu, sage Syūmarāśmi (i, 112, 16), Śaryyāta (i, 112, 17), Adhrigu (i, 112, 20; viii, 22, 10), Kṛṣānu (i, 112, 21), Kutsa, son of Arjjuna; Turbīti, Dabhitī, Dhvasanti and Puruṣanti (i, 112, 23), King Jāhuṣa when surrounded by enemy (i, 116, 20; 117, 16; vii, 71, 5), Vaśa (i, 116, 21; viii, 8, 20; x, 40, 7), Dirghatamā, son of Mamatā, from fire and water against Traitana (i, 158, 4-6); Priyamedha (viii, 5, 25), Medhātithi, Daśabraja, Gośaryyā, (viii, 8, 20); Tryaśdasyu (i, 112, 14; viii, 8, 21), Takṣi, Paktha (viii, 22, 10), Uśanā, (x, 40, 7); Kṛśa (i, 112, 14; 7, 40, 8); Śvaiyuva (x, 40, 8), and Kanva (viii, 5, 25).

(23) Learned Madhuvidyā¹ from Dadhici son of Atharvā whom they supplied with a horse's head (i, 116,

¹ According to Sāyaṇa Madhuvidyā, also called Apikakṣa is the science of re-uniting the severed head with the trunk: *विच्छेद्यं यं निरुद्धं कथमप्रेक्षितं पुनः सन्धानमूतं प्रवर्गविद्याख्यं रक्ष्यं*—Sāyaṇa (i, 117, 22).

12; 117, 22; 119, 9); became a guest of Divodāsa (i, 116, 18; 119, 4), came to Jahnu's sons with riches and progeny (i, 116, 19), and gave food to Manu (i, 112, 18) and Saubhari (viii, 5, 26).

(24) Gave potable rain water to merchant Dīrghaśravā, son of Uśija, (i, 112, 11), recovered the cows of Triśoka (i, 112, 12), made Paṭharvā strong in battle (i, 112, 17), and gave food to Sudāsa (i, 47, 6) and Bharadvāja (i, 117, 11), and Agastya (viii, 5, 25).

(25) They cured Śyāva who was cut in three pieces (i, 117, 24) and gave him a bride after he was cured of leprosy (i, 117, 8); raised water to quench thirst of Sara son of Rcatka (i, 116, 22); satisfied Vabhru with Soma (viii, 22, 10) and helped Gotama to drink water in the desert (i, 85, 11; 116, 9).

(26) Gave riches to Manu (i, 112, 16, 18), Śucānt, Sudāsa, the son of Pijanava (i, 112, 19), Vaśa (i, 116, 21), Anśu (viii, 5, 26), and King Suśāma (viii, 26, 2).

(27) Released Saptavadhri and allowed him to enjoy the company of his wife; she gave birth to a child after ten months (v, 78, 5-9).

(28) Gave Puraya's mares, Sumiḍha's cows, Peruka's food, King Sānta's horses and men, and Purupanvā's horses to Bharadvāja (vi, 63, 9, 10).

(29) Discovered Vṛtra (viii, 9, 4), produced fire by friction with woods (x, 24, 4).

(30) Aśvins were magnified by Kākṣivān, Vyaśva, Dīrghatāmā and Pṛthi, son of Venā (viii, 9, 10).

(31) Gave rain water to Manu and furrowed the land and sowed wheat (vii, 22, 6).

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In the R̥gveda Aśvins are magnified in the following hymns :

i. 3 : 1,2,3.	iii. 58.	viii. 5.
20 : 3.	iv. 43.	8.
22 : 1-4.	44.	9.
30 : 17.	45.	10.
34.	v. 41 : 3.	22.
46.	43 : 17.	26 : 1-20.
47.	51 : 11.	27 : 8.
92 : 16-18.	73.	29 : 8.
112.	74.	35.
116.	75.	57.
117.	76.	73.
118.	77.	85.
119.	78.	86.
120.	vi. 62.	87.
139 : 3-4.	63.	101 : 7-8.
157.	vii. 67.	x. 24 : 4-6.
180.	68.	39.
181.	69.	40.
ii. 37 : 5.	70.	41.
39.	71.	65 : 12.
41 : 7-9.	72.	106.
	73.	131 : 5.
	74.	143.

References to the Aśvins as medical men in the R̥gveda :

- i. 34. 6 : Prayer for heavenly medicine, earthly medicine and aerial medicine. The three elements of the body mentioned.

Nursed Śamju son of Vṛhaspati.

- 11 : Prayer to prolong our life.

- 116, 15 : Made artificial limb of iron for Viśpalā.¹
 157, 4 : Prayer to prolong our life.
 5 : Prayer to preserve the wombs of animals.
 6 : You have become physician by your medicines.
 180, 4 }
 10 }
 182, 8 } : Prayer for long life, food and strength.
 183, 6 }
 184, 6 }
 ii. 9, 4 : Prayer to save us from old age.
 v. 75 : Madhuvidyā Viśārad : Versed in the science of
 reviving dead men.
 78, 7-9 : The mantras for prevention of abortion
 गर्भक्षायस्तुपनिषत् ।
 vi. 62, 7 : You hear the prayer of women longing for
 sons. You make dry cows yield milk.
 10 : Come to our house to give us sons.

१ “चरित्रं हि वेरिवाच्छेदि पशुम्
 आजा खिलस्य परितक्मायाम् ।
 सद्यो अंधामायसीं विश्पलायै
 घने हृदि सत्तवे प्रत्यक्षतम् ॥”

Rgveda, i, 116, 15.

अगस्त्यपुरोहितः खिलो नाम राजा तस्य सम्बन्धिनी विश्पला नाम स्त्री, संयामि
 शत्रुभिः क्षिन्नपदा असीत् । पुरोहितेन अगस्त्येन स्तुती अग्निनी रात्री आगत्य आयोमयं
 पार्दं समधत्ताम् । तदेतदाह—‘अजा’—आजी, संयामि, अगस्त्यपुरोहितस्य खिलस्य
 राज्ञः सम्बन्धिनीः विश्पलाख्यायाः, ‘चरित्रं’—चरचम्, ‘वेरि’—वेः पश्चिः पशुं
 पतयन् इव, ‘आच्छेदि हि’—पुरा क्षिन्नममृतं सक्तु । हे अग्निनी ! युवां अगस्त्येन
 स्तुतौ समौ, ‘परितक्मायां’—रात्री, आगत्य, ‘सद्यः’—तदानीमिव, ‘सत्तवे’—सत्तुं
 गन्तुम् इत्यर्थः, विश्पलायै ‘आयसीं’—सौहमयीम्, ‘जघ्नां’—जघ्नीपक्षिणं पादम्,
 ‘प्रत्यक्षतम्’—सम्मानम् एकीकरयमित्यर्थः, कृतवन्ती ।”

vii. 8, 19 : Giver of cure.

9, 11 : Be the nourisher of the world and the body.

15 : Give Vatsya a house, like Vimada, with medicines which are near and which are distant.

22, 10 : You treat the sick.

We find similar references in the Atharvaveda.

vii. 53, 1 : The Aśvins—they who are the two physicians of the gods—they have repelled death from us by their powers.

In the Caraka Samhitā the deeds preformed by Aśvins are thus referred to :—

“The twin Aśvins are celestial physicians. It has been said that they are partakers of a share of the offerings made in sacrifices. (In days of yore) when the head of sacrifice had been severed from his body, it was the Aśvins who fixed it again on the trunk.

“The broken teeth of Pusaṇa, the torn out eyes of Bhaga and the stupefaction of the arms of the wielder of the thunderbolt were treated by him.

“The deity also of cool ray (*viz.*, Soma) was treated by them when he was seized by Phthisis. Verily when Candra was (in consequence of Phthisis) divested of his handsome features, it was the Aśvins who restored him to happiness (by curing him of his maladies).

“Cyavan, the son of Bhrigu had not given up desire when he had become old and been overtaken by ugliness and when he had been afflicted by loss of complexion and voice. It was the Aśvins who restored him to youth once more.

“Those foremost of physicians by these and diverse other acts (of success in treatment) became objects of

worship with many high-souled deities and others having Indra for their head.¹

In the *Suśruta Saṁhitā* I. 1, the supernatural cures performed by Aśvins are thus related :—

“It is said that the god Rudra severed the head of the god of sacrifice (Yajña). Thereon the gods approached the divine Aśvins and addressed them in the following manner :—‘O Lord Aśvin twins, who are to be the greatest of us all, unite the head of the Yajña with his severed trunk.’ The Aśvins replied, ‘We shall do, O Lords, as you order us.’ Then the gods propitiated the god Indra in order that a portion of the oblations offered in the course of a sacrifice, might be allotted to those heavenly twins. The Aśvins reunited the severed head of Yajña to his body as prayed for.” The Aśvins thus secured an everlasting glory on the art of healing and received the Aśvin libation. “At one time,” says he, “surgeons were looked upon as unclean and unfit to mix in respectable society ; but the success gained by the Aśvins in the case of Yajña at once raised them in the estimation of all” (*Vide* Tait. Saṁ., vi, 4, 9, 1 ; Śatap. Br., and Ait. Br., 1, 18).

The following epithets are applied to the Aśvins in the *Rgveda* :

Śatakratu (i, 112, 23).

Nara (i, 46, 4 ; 47, 8 ; 182, 8 ; 183, 3).

Madhuvidyā Viśārad (i, 116, 12 ; 117, 22 ; 119, 9 ; v, 75, 1—9).

Two Dhanañjayas (vii, 74, 3).

Two Rudras (ii, 41, 7 ; v, 73, 8 ; viii, 22, 14 ; 26, 5).

Pracetās (viii, 9, 15, 20).

Maghavā (viii, 26, 7).

¹ A. C. Kaviratna's Trans. of Caraka Saṁhitā, pp. 1067-68.

Śacīpati (vii, 67, 5).

Bhiṣaj : (1, 116, 16 ; viii, 86, 1 ; x, 39, 5).

Paura (v, 74, 4).

Amara (Immortal) (v, 77, 5).

Two Kings (vii, 67, 1 ; 71, 4 ; x, 39, 11).

Two devas (vii, 70, 4 ; 74, 4 ; viii, 35, 4-6, 26 ; x, 24).

Two lords of water (viii, 21, 4, 5 ; 26, 6).

Two poets (x, 40, 6).

Vidhātā (i, 181, 7).

Puṣā (i, 184, 3).

Two Nāsatyas : i, 3, 3 ; 20, 3 ; 34, 7, 9-11 ; 46, 5
47, 7, 9 ; 116, 1, 2, 4, 9-11, 13, 14, 17, 20, 22 ;
117, 6, 11, 23 ; 118, 4, 11 ; 180, 9 ; 182, 43 ;
183, 3 ; 184, 3 ; ii, 41, 7 ; iv, 3, 6 ; 43, 7 ; 44,
4, 7 ; v, 74, 2 ; 75, 7 ; 77, 4 ; 78, 1 ; vi, 63, 1,
7, 10 ; vii, 67, 3 ; 72, 1, 2, 5 ; 72, 5 ; 74, 6 ;
viii, 5, 23, 32, 35 ; 8, 14, 15 ; 9, 6, 9 ; 22, 5 ;
26, 2, 8 ; 42, 4-6 ; 57, 4 ; 85, 1, 9 ; 101, 7 ;
x, 41, 2.

Two Dasras : i, 3, 3 ; 47, 2, 6 ; 92, 16, 18 ; 112, 24 ;
117, 5, 20, 22 ; 118, 3 ; 119, 7 ; 120, 4 ; 139, 3,
4 ; 180, 5 ; iv, 43, 4 ; 44, 6 ; vii, 69, 3 ; viii,
86, 1.

THEIR WORKS :

The Aśvins are credited with the authorship of the following books :—

1. Cikitsāsāra Tantra : or the Abstract of Treatment by the Aśvins. It is mentioned in the Brahavaivarta Purāṇa.¹

2. In the Bower MS., the eleventh chapter, treats of "The doctrine of Chebulic Myrobolana according to the

¹ See footnote 3, pp. 6-7.

Aśvins." "This chapter apparently professes to be the Harītaki-kalpa or 'Doctrine of Chebulic Myrobolan' extracted from a medical work by the Aśvins. This may have been the Aśvini Saṁhitā of which, however, no copy seems now to be known to exist. As an extract, therefore, from a lost work of the Aśvins, the chapter is important. A similar Harītaki-kalpa which gives the doctrine of the ancient physician Hārīta on Chebulic Myrobolan occurs in the Hārīta Saṁhitā in its Kalpa-sthāna (printed Ed., p. 400)." (Hœrnle.)²

3. The Aśvin Saṁhitā : An Aśvin Saṁhitā is quoted in Bhāva Prakāśa II, 3, p. 24 (Jiva. Ed.). Dr. Cordier (see his *Recentes Decouvertes*, p. 29) possesses fragmentary manuscripts of two distinct works, both calling themselves Aśvini Saṁhitā, and both containing a version of a Harītaki-kalpa. *Dr. Hœrnle thinks them to be *medieval apocryphal* production.

4. Dhāturatnamāla : A compilation from the Aśvini Kumāra Saṁhitā on the preparation of metallic and mineral powders as oxides and other compounds of gold, silver, copper, lead, tin and iron.

MSS : Bik. MSS., 1393. (Samvat 1717).

Begins :

अथ धातूनां रत्नमालां वक्ष्यामः ।
 रौप्यं ह्येन तथा तादृशं नागं वज्रं तथायसम् ।
 मरचेभ्यो भयमाता रौप्यस्ताय ये नराः ।
 रत्नमाला हि धातूनां कृता एषां हिताय वै ॥

End :

इति—वैद्यकशास्त्रे अश्विनीकुमार संहितायां रत्नमाला समाप्तः

See also Devadatta of Guzrat (14th century).

² Footnote 359 in Bower MS., Ch. XI, p. 164.

5. *Aśvini Saṁhitā* :

MSS. : G. O. M. L. xxiii, 13069.

• “A treatise on medicine said to have been revealed by the celestial twin brothers *Aśvins*. Contains Kanarese meaning for the stanzas.

Beginning :

अश्वगन्धा वचा कुष्ठं गजपेष्पाक्षिका समम् ।

महिषीनवनीतेन क्षेपात्कर्णं विवर्धते ॥

Colophon :

इत्यश्विनीसंहितायां सन्निपातप्रकरणं ।

End :

उपक्षेपस्ततो दाहः देहे तिष्ठन् मदाव्ययम् ।

विषमं वा खरं कुर्यात् सत्यं व्यापदमेव च ॥

6. *Nāḍī Nidāna* : “A commentary on the *Nāḍī Nidāna* which is a treatise on the science of feeling the pulse, said to have been revealed by the twin celestial brothers *Aśvins*.”

MSS. : G. O. M. L. xxiii, 13151.

Beginning :

आदौ समक्षरोगेषु अटस्थानं परीक्षयेत् ।

नाडीं च स्पर्शरूपं च शब्दनेत्रपरीक्षयोः ॥

नाभिस्थानं च जिह्वा च एता दृष्ट्वा भिषग्वरेः ।

आदौ रोगपरोक्ष(च)आदौ समक्षरोगेषु बाह्ये अपित्तगतसर्वरोगेषु । अट-
स्थानगतनाडीं परीक्षयेच्च शोधयेत् ।

End :

सर्वेषां रोगाणाम् एतच्च बड़गुणा शुभाः ।

Colophon :

अश्विनीदेवताहृतौ नाडीपरोक्षां सप्तविंशति श्लोकाः समाप्ताः ।

The formulæ attributed to the Aśvins :—

Formulæ.	Books.	Page.	Verses.
1. The Mātulaṅga Pills	{ C.D. xxiii, 11, Bower MS.	251 87	75b-77a
2. The other " "	" "	"	80-84
3. The Gulma Powder	" "	88	85-6
4. Aśvina-haridrā-cūrṇa	" "	"	96-101
5. The Laṣuṇa clarified butter	" "	100	216-22
6. The Antifebrile " "	" "	"	223-5
7. The Antitoxic " "	" "	102	241-4
8. The Vindu clarified butter	" "	103	251-5
9. Formula to cure hæmorrhage	" "	117	418-25
10. Amṛita-taila	" "	106	287-312a
11. Kṣīra Yoga	"	133	575
	V. S. xxxv.	497	29a
	C.D. xxxiii.	503	37b
	B. P. II. 3	388	7b
	S. S. vi 58	43	...
12. Ayorāja Yoga	Medicines for strangury	383	40a
	"	133	579
	V. S. xxxv.	499	48
	C. D. xxxii.	384	26a
	B. P. II. 3.	37	...
13. The Aśvagandhā Enema	H. S. III. 29	312	...
	"	139	618-25a
14. Pippalī-Vaddhāmāna Rasāyana	"	142	716-737a
15. Aśvina-rasāyana	"	148	773b-81a
16. A formula for 3 different gruels	"	153	810-13
17. Aśvina Haritaki Kalpa ¹	"	164	917-29
18. Bṛhat Guḍa Pippalī	R. S. S.	401	...
19. Phalaghṛta	V. M.	489-99	...
	B. P. II, IV.	1115	...
	G. N. I.	15	...
20. Amṛta Guggulu	V. M.	228	...
	G. N. II,	240	...
	C. D.	152	...
	O. D.	150	...
21. Amṛtādyā Ghṛta	B. P. ii. xxi.	610	...
22. Amṛtaprāśavaleha	" ii. ii.	388	...
23. Punarnavā Guggula	C. D.	152	...
24. Kuṅkumādyā Taila	C. D.	274	...
25. Gadhūmādyā Ghṛta	V. M.	412-13	...
26. Mahāśugandhi Oil	V. M.	527	...
27. Guḍakṣmāṇḍa Kṣmāṇḍaka Rasāyana	"	"	...
	"	528	...
	A. H. S. IV.	78	...
	G. N.	340	...

तबीजपूरकरसेभिंचितं प्रपिब्य

कूर्याद्विषं च गुड़िका वदरप्रमाणाः ।

एकामरिष्टमधुमाधवशर्करेण

कास्थं पिबेत् सुरया दधिमस्तुना वा ॥

काशं श्वासं पाण्डुरोगाच्चिरस्थं

ग्रीहृषोयं शूलमानाहसुयं ।

हृक्षां हृदरोगं जाव्यतां

छौवनत्वमासातिसारश्च सशूलगुणः ॥

विस्त्रिकामलसकमग्निमाह्वं

प्रवाहिकां गुदपरितापमर्शसां ।

शमेन्ति ता विधिवदिहोत्तमं तमः

प्रयोजिता ह्यपि खलु चर्मवारिणा ॥

3. AŚVIN'S GULMA CURNA.

गुल्मचूर्णमात्रिनं ।

पाठाकलिङ्गयवमुस्तकरोहिषीनां मागाः

सङ्घातिविषया धरणानि कूर्यात् ।

कूर्याच्चतुर्थधरणेन समा हरिद्रां

मूलेण गोः सह पिबेद्य चूर्णमेतत् ॥

कुष्ठाच्च षट्त्रिंशतिकानि निहन्ति देहे

स्थानानि नाशयति सममहाचयस्य ।

गुल्मां च नाशयति मासकृतः प्रयोगः

सर्वान्निकस्य घृतमांसपरस्य जम्बोरिति ॥

4. AŚVINI-HARIDRĀ-CURNA.

हरिद्राचूर्णमात्रिनम् ।

उभे हरिद्रे मरिचं पद्मं कुष्ठं सपिप्पली ।

कर्पाससूतं मांसो च सर्वाः चारमवाद्यानम् ॥

एतानि समभागानि दृषदायां प्रपीषयेत् ।
 कोलास्थिमात्रां गुडिकां छायायां परिशीषयेत् ॥
 ततस्तु गुडिकामेकां दद्यादुष्णे चारिष्या ।
 + + + प्रशम्बयन्ते रोगजातानि ताच्छृणु ॥
 अजीर्णकमुदावर्त्तं सूतकृच्छं गलपहम् ।
 आनाहं वातगुल्माश्च यच्च लूताविषं भवेत् ॥
 सर्व्वं दूषीविषं हन्ति + + इषिकदष्टकम् ।
 मूढवातमपश्मारं शण्ड्यं शण्ड्यपुमांश्च यः ॥
 भूतयक्ष्मथीग्न्यादं मूढगर्भाश्च यास्त्रियः ।
 दंष्ट्रामूलविषाथेषु पानमालिपनं तथा ॥

5. THE LASUNA CLARIFIED BUTTER,

आश्विनं लग्नकं नाम घृतं ।

लग्नस्य शतं विद्वान्लैट्रोक्षे विपाचयेत् ।
 चतुर्मासवशेषश्च कषायमवतारयेत् ॥
 तेन वैद्यः कषायेन विपचेत् घृतादकम् ।
 कल्कपेथ्याणि चैतानि सिद्धाग्नौ प्रदापयेत् ॥
 कर्षश्चिककसूतस्य पिप्पली कर्षमेव च ।
 चव्यायाश्च भवेत्कर्षः शृङ्गवेरं पलं तथा ॥
 लवणानाम् च पञ्चानाम् पलार्द्धास्त्रवेतसात् ।
 तथा रामठकस्यापि हिङ्गुनोऽत्र पलम् भवेत् ॥
 ततस्त्रिङ्गं निक्षुतं सप्यक्सुगुप्तं तन्निधापयेत् ।
 ततोमात्रां पिवेत्काले शृणु मे येषु तद्वितम् ॥
 वातष्टीलासु गृध्रस्यां वातगुल्मे ब्रीहौदरे ।
 वातश्चेत् क्षातिपाण्डुनामर्शसूत्रश्च भगन्दरे ॥
 एकाङ्गरोगिणां दद्यात् तथा सर्वाङ्गरोगिणाम् ।
 लग्नमाद्यं घृतं ह्येतदग्निर्वा संप्रकल्पितम् ॥

6. THE ANTIFEBRILE CLARIFIED BUTTER.

ज्वरहरमात्रिणं नाम घृतं ।

घृतद्वयगुणे तोये साधयेदा जलचयात् ।
ततो दशगुणे तोये साध्यमामलकनाथा ॥
दशभागावशिष्टेऽस्मिन्घृतप्रस्थं विपाचयेत् ।
ततो यथाबलं मावां पाययेज्ज्वरकाशितम् ॥
सर्वज्वरहरं सर्पिरेतदन्नान्नाभिपूजितम् ।
दौर्घकालं प्रयुक्तम् भवेत्तत्तम् रसायनम् ॥

7. THE ANTITOXIC CLARIFIED BUTTER OF THE ASVINS.

विषहरनाम घृतमन्त्रिणम् ।

चन्दनं स्यादशिरस्य पद्मकं कृद्विन्दकम् ।
वायनाथाम् समीं दद्यात्तथा चन्दनशरिणां ॥
तथा प्रतिविषां चैव तथा तामलकी भवेत् ।
चतुर्गुणे जले वैद्यो घृतप्रस्थं विपाचयेत् ॥
तच्च पीतं प्रमेहीनाम् रक्तपित्तचयेषु च ।
अर्थसाम् भिन्नवर्णानाम् पाण्डुरोगे च तद्वितम् ॥
प्रसृष्टेदं ग्रहणोदीषां स्वग्दोषां च शरीरिणाम् ।
सर्पिरेतद्वेत्पथं विषघ्नमस्ततोपमम् ॥

8. THE VINDU CLARIFIED BUTTER.

विन्दुघृतमात्रिणम् ।

सुधाक्षीरपलीनेह हे पली सर्पिषः पथेत् ।
कम्पिन्नकपलं चैकं श्यावाहम् सैन्धवस्य च ॥
त्रिहतायाः पलाशैकं कुङ्कुमोऽमलकीरसाम् ।
तोयकंसेन विपक्षेच्छनेरुहं हृदिना भिषक् ॥
एतद्विन्दुघृतं नाम अन्त्रिनोऽनुमतम् शुभम् ।
विन्दवः पिबते यावत्तावदेतन्निश्चिद्यते ॥

कर्षप्रमाददातव्यं जठरौसोपगुह्ययोः ।
 तथा कण्ठपरोगिनाम् युञ्जीत सतिमान् भिषक् ॥
 उच्चानुपिवेत्तोयमल्पत्वात्तस्य सर्पिषः ।
 एव गुल्माग्ननिचयाग्नशलाग्नपरिग्रहान् ॥
 भिनत्येकप्रयोगेन वायुज्ज्वलधरानिव ।
 पञ्चगुल्मवधारणम् हि सर्पिरेतत् प्रवर्तितं ।
 सर्वानुरवधारणाय यथा वक्ष्यं स्वयमभूव ।
 एतद्विन्दुघृतं प्रोक्तं सिद्धम् सिद्धानुमानितमिति ॥

9. A FORMULA OF THE ASVINS TO CURE HAEMORRHAGE.

रक्तपित्तिनामान्विनी योगः ।

विषुष्टशब्दौ श्रीमन्तावश्विनी भिषजाम् वरी ।
 योगम् लोहितपित्तिनामर्शसाम् ज्वरितेषु च ॥
वासवायोचतुः श्रेष्ठम् यदुक्तम् ब्रह्मणापुरा ।
चन्दनं नलदम् रोध्रमुज्जीरम् पद्मकेसरम् ॥
 नानपुष्पाश्च विल्वश्च भद्रमुक्ताय शर्कराम् ।
 हिरिवेरश्च पाठाश्च कुटजश्च फलं त्वचम् ॥
 शङ्खवेरम् सतिविषां धातकौम् सरसाक्षनाम् ।
 चाक्षस्थि कण्टसारास्थि तथा मोचरसं भवेत् ॥
 नीलोत्पलम् समङ्गां च सूक्ष्मलाम् दाडिमत्वचम् ।
 चतुर्विंशति र्देतानि समभागानि कारयेत् ॥
 तच्छुलोदकसंयुक्तं चूड्रेण सह पाययेत् ।
 हितं लोहितपित्तिनामर्शसाम् ज्वरितेषु च ॥
 सूक्ष्मातमोपशृणानाम् दृषार्तामाश्च दापयेत् ।
 चतिसारश्च चूर्णीश्च स्त्रीषाम् च रजनियहम् ॥
चविभ्यानुमती योगो रक्तपित्तिनिवारणः ।
प्रच्युतानाश्च गर्भसाम् स्थापयन् धरमुच्यते ॥

10. AMETA OIL.

अमृत-तेलं नाम ।

संखवान्विनी देवी भिवजी देवपूजितौ ।

× × × परमे—+ तैलम् पुष्टि विवर्द्धनम् ॥

सर्वव्याधि प्रशमनं राजाङ्गमण्डतोपमम् ।

अमृतप्लाम विख्यातं तैलं बलकरं वृक्षम् ॥

सुभूमौ मधुकं जातमुद्धरेत् कृतमङ्गलः ।

पुष्पेषु प्रयतो विप्राश्च स्वस्तिवाच्य समासतः ॥

शाङ्ख्यैश्च खरसं तस्य चतुष्पात्रम् विचक्ष्वः ।

प्रपीड्यरीकयताम्, विसप्रन्धिं शतावरीम् ॥

ग्रहाटकान्वाभलकानुदुम्बरकशेखराः ।

बीरिचाम् चैव इचाचाम्, लवणानि स्त्रु पृथक् पृथक् ॥

कुशकाशेषुमूलानि शरबीरुषयोक्तवा ।

गुदाचाम् नाडिकाचाम्, च मूत्रम्, क्रीचानदानी च ॥

बहरीच विदारीच वेतसं साङ्गुरुषकम् ।

निम्बशाल्मलिखज्जुर्नाडिकैश्च प्रियङ्गवः ॥

पटोळं कुटजं द्राक्षां सद्यःशालम्, च चन्दनम् ।

ककुभम्, चाचक्षुषं च लामजुकधनञ्जयी ॥

कषायममुराक्षां च श्रोतान्यपि च लाभतः ।

भाग्नाम्, सतुष्यलान्कृत्वा बिद्रोषेऽपाम्, विपाचयेत् ॥

रसेऽष्टभागशेषे तु कल्के रेभिर्विपाचयेत् ।

बलां नानबलां जीवामात्मगुप्ताम् चशेखराम् ॥

नतं रसं च व्युक्षां च सूक्ष्मां लघुमेव च ।

जीवकबन्धकी मेदी मधुकां नीलमुत्पलम् ॥

कुङ्कुमं चर्बं करचमगुलम् पद्ममेव च ।

विहारीम् बीरकाकीजीम् बीरामपि च शारिणी ॥

शतावरीम् प्रियङ्गुम् च गुडूचीम् पद्मकीसरम् ।
 लामञ्जकं चन्दनानि राजादन फलानि च ॥
 सुक्ताविद्रुमसंस्थानाम् चन्द्रकान्तेन्द्रनीलयोः ।
 स्फटिकं रजतम् ह्रिम् मणिमौक्तिकमेव च ॥
 यष्टिमधुकमास्त्रिष्ठामंशुमत्स्यः पलोन्मिताम् ।
 अक्षपिष्टानिमान् कृत्वा शनेष्टं हृदिना पचेत् ॥
 तैलपावाणि चत्वारि तैलादष्टगुणं पयः ।
 पयोर्द्विभागेन भिषक् प्रदद्यादास्त्रकाष्टीकम् ॥
 शतशोऽथ विपक्तव्यं सङ्घनगुणमेव वा ।
 सम्यक् सिद्धस्य चाप्यस्य एतद् भवति लक्षणम् ॥
 आलोच्यते करेणैव रवेः काल उपस्थिते ।
 स्वस्तिवाच्यं विजातिम् स्तु प्रयतः कृतमङ्गलः ॥
 प्रयोजयेत् तैलमिदमृष्टतम् देवपूजितम् ।
 वस्त्राभ्यापनपानैश्च नास्यैरभ्यञ्जनैस्तथा ॥
 सर्व्वरोगप्रशमनमिन्द्रियाणां बलावहम् ।
 दाहदृष्ट्यापरीतानाम् श्रेष्ठमभ्यञ्जनं शिवम् ॥
 वृद्धानाम् बालजगाम्बालानामङ्गवर्द्धनम् ।
 कान्तत्वं स्तिषु सौभाग्यं प्रजयश्च बहुविदारः ॥
 स्त्रियश्च गर्भं गृह्णाति प्रयोगादमृतस्य हि ।
 अशीतिम् वातजान् रोगान् रक्तजान् पित्तजां तथा ॥
 श्लेष्मिकान् सन्निपातोत्थान् सर्वांश्चैव चिकित्सति ।
 सुपर्णं चक्षुर्मास्त्रेण तथाभ्यङ्गादाजायते ॥
 पापमहरमलक्ष्मीं श्रीमिवाभिविर्बर्द्धनम् ।
 अथ प्रयोगात् तैलस्य मङ्गलिः श्ववशः क्लृप्तः ॥
 पुनर्युवत्वामपन्नो जरारोगविवर्जितः ।
 आयुष्कामश्च भगवान् नार्कण्डेयो महान् हृदिः ।
 तैलमेतत् प्रयुज्यामी दीर्घमायुरवाप्तवानिति ॥

11. KṢĪRA YOGA.

क्षीर योगः ।

गुडेन क्षपयेत् क्षीरं कटुष्वं कामत. पिबेत् ।
मूत्रगृहस्य भेषज्यं सद्यस्कं मतमश्निनोः ॥

12. AYORĀJA YOGA.

अयोरज योगः ।

अयोरजः सूक्ष्मपिष्टम् मधुना सहपाययेत् ।
मूत्रगृहस्य भेषज्यं सद्यस्कं मतमश्निनोः ॥

13. THE AŚVAGANDHĀ ENEMA.

अश्विनोरश्वगन्धा वस्तिः ।

अतः परमं प्रवक्ष्यामि वल्लवर्णं प्रसादनम् ।
येन मांसानि बह्वन्ते बलं चैवोपजायते ॥
मूलानामश्वगन्धायाः पञ्चविंशतपत्राणि तु ।
कण्डुशम्भे दायित्वा तु स्याख्यामाधाय साधयेत् ॥
पादभागवशिष्टाश्च ज्ञात्वा तमवतारयेत् ।
तद्रसम् तु परिस्नान्य हृदपात्रेऽवसेचयेत् ॥
तस्मिन् कषाये मतिमानौषधानि प्रकल्पयेत् ।
जीवनि सर्षपाणि शर्कराचूर्णमेव च ॥
मधुसर्पिषश्च प्रसृतम् पिप्पलीचूर्णमेव च ।
किञ्चिन्नवचिकम् कृत्वा खलेनालोचयेद्विषक् ॥
आसिञ्च वसावष्टिद्रे वसिकर्मणि कारयेत् ।
एकेन यदि वा द्वाभ्यां त्रिभिर्व्यापि प्रमत्सतः ॥

प्रय्यागते निरुद्धेऽस्मिन् परिषेकः सुखाप्नुना ।
 ततो लोहित शालीनामीदनं मधुसर्पिषा ॥
 क्षीरेण सह भुञ्जीत जाङ्गलानाम् रसेन वेति ॥

14. PIPPALĪ-VARDHAMĀNA TONIC

पिप्पली वर्धमान रसायन ।

पिप्पली वर्धमानस्य गुणाः कर्ण्यं च के बलम् ।
 प्रवत्याम्यानुपूर्वेण प्रजाणां हितकाम्यये ॥
 न ह्ये तदसृतम् पित्वा पश्चात्तापयन्ति मानवाः ।
 दर्शयत्येव सिद्धिं हि पाषाणामलकं यथा ॥
 तस्मात्क्षीरं पुष्टिं प्रजां मेधास्य काचता ।
 रसायाचामिदम् सौम्यं कार्यमायुर्ज्विर्वर्द्धनम् ॥
 जीवनीयानि पित्वा तु क्षिण्णोवन्नविरक्तवान् ।
 कृतसंस्मरणः काले पुण्यादेनारमेततः ॥
 पुनर्ज्वल्यथ पुष्येण श्वशरेण श्विष्टया ।
 त्रिषूतरेषु हस्तेन सीमे योगमुपागते ॥
 उपोषितः शिरःखातः शुक्लरासा जितेन्द्रियः ।
 अथ्यथय देवतान् विप्रम् शेकाम् खादेत् पिप्पलीम् ॥
 ततश्चानुपिवेत् क्षीरं गव्यं ह्यगमथापि वा ।
 औषे तस्मिन् क्षु भुञ्जीत शालीनाम पयसीदनम् ॥
 एवमेतन्नरः खादेत् वर्धमानं सदाहनि ।
 अतं पूषम् भवेद्यावद्दश वर्षाष्टयेव च ॥
 ततोऽग्नेऽप्यवकर्षेत् समरात्रम् पयोदनम् ।
 प्रायश्चक्षुभोक्तव्यं तथा मुद्गरसीदनम् ॥
 समरात्रे तृतीये तु जाङ्गली मधुरी रसः ।
 मोक्षं पेयं च पानीयम् अतश्चीतं नुष्यन्वितम् ॥
 गृहे निवाते चासीत सततम् हितसेवि च ।
 ततः क्रमेणामलकमम्यलार्धमुपकल्पयेत् ॥

उद्यान्वसं दाहिमान्वससु सदा खानसु वीक्षयेत् ।
 चनेन विधिना चिप्रं पुष्टिं लभति मानवः ॥
 प्रमदा लभते गर्भम् बन्धा चापि प्रजायते ।
 सार्वमन्थनेन शिवाच्च राजयक्षा इक्षीमकः ।
 सपञ्चारसद्योन्मादो ज्वरसु विषमागतः ।
 चनेकाग्रः प्रयुक्ते तु बलीपक्षित नाशनं ॥
 बर्षतेजोबलाधानिमघो शीतमजीवनम् ।
 कुष्ठरीगनिद्वन्तारमारोग्यजननं शिवम् ॥
 यक्रबलप्रगुहसु इन्द्रियाणाम् प्रसादनम् ।
 पिप्पल्यो हि शिवाः काये कटुका मधुरान्वयाः ॥
 क्षिन्वाश् शीतवीर्याश्च व्यवापिन्यो गुणान्विताः ।
 कटुकत्वात् कफे पथ्याः खेदश्च पवने हिताः ॥
 शैत्यात्पित्तप्रशमना युज्यन्ते सर्वकर्मसु ।
 त्रिभिः प्रवर्तते चाद्यः-कल्पः पञ्चविरेभ च ॥
 चटको दशकशान्यो बलकात्ममेत्थ च ।
 शीरागुपानासाः कार्यास्तथा शीरोपसेवनाः ॥
 नियमसु यथाहृष्टमाग्नीषसु यथानुतः ।
 तस्मात्प्रियममात्मन्यप्यपुरुषेच यथाक्रमम् ।
 प्रयोज्यमिदमारोग्यश्रीबलायुर्ध्वं वर्द्धनम् ।
 पिप्पलीवर्द्धमानसु कल्पोऽन्विभ्याम् प्रकल्पितः ।
 अनुस्यूना प्रयोक्तव्यो यथासिद्धिमवाप्नुयात् ।
 समुत्थानसु सपञ्चारं सपत्रां सफलान्तथा ।
 काकमाचीन्तु प्रत्यक्षां सङ्करेभ्यस्तिमाहरः ।
 तुलापादं सुसूक्ष्मं तु जलद्रोणे विपाचयेत् ॥
 चतुर्भागस्थिते तत्र तेलप्रसूयं विपाचयेत् ।
 चतुर्गुणेन पयसा कल्पां सेमान् विधानवित् ।
 प्रपीक्षरीकम् मधुकम् राक्षसूलम् अतारोम् ।
 विद्वद्वा अतपुष्याश्च स्वयमगुप्ताफलानि च ॥

एतदभ्यङ्गने पाने नष्टकर्मास्तुवासने ।
 अशोति वातजान् रोगां सतेजसेतद्वपोऽस्ति ॥
 मधूकपर्ण्याः स्वरसः प्रयोज्यः क्षीरेण यष्टिमधुकस्य चूर्णम् ।
 रभं गुड्मुखास्तु समूलपुना आयुष्यदाभ्यामयनाशनि ॥
 वलाप्रिवर्णं स्मृतिवर्णानि मेध्यानि क्षेमनि रसायनानि ।
 कल्कः प्रयोज्यः खलु शङ्खपुण्याः मेध्याविशेषेण तु शङ्खपुष्पी ॥
 घृतमाश्लिकासंयुक्तं मधुकं यः पिवेन्नरः ।
 क्षीरागुपायी स्त्रीवर्ज्यः स जिबेक्षारदाशतम् ॥
 पञ्चाष्टौ सप्तदश चापि पिप्पल्यो मधुसर्पिषा ।
 रसायनगणान्वेषी मासमेकम् प्रयोजयेत् ॥
 तिस्रस्तिस्रस्तु पूर्वार्कं भूताये भोजनस्य च ।
 पिप्पल्यः किंशुकक्षारभाविता घृतभर्जिताः ॥
 प्रयोज्याः घृतसंमिश्रा रसायनगुणेषिणा ।
 जितुं काशं च यं शोषं श्वासं हिक्कां ग्लानयम् ॥
 अर्शसि गृह्णीदोषं पाण्डुतां विषमज्वरं ।
 पौनसं स्वरभेदश्च गुल्मं वातमलासकम् ॥

15. ĀŚVINA-RASĀYANA.

अश्विनारसायनम् ।

तप्यमानम् तपोऽस्यं विद्मानिवं मङ्गास्तुभिं ।
 अश्विनी देव भिषजावृचतुर्व्यरदाम् वरौ ॥
 तपश्चरणखिलस्य नरसाप्यायनम् पुनः ॥
 रसायनमिदं श्रेष्ठमारोग्यवत्तद्वर्णनम् ।
 गौरामलकचूर्णानाम् प्रस्थः श्लाघिश्चिरोद्धृतः ॥
 एकविंशतिरात्रम् तु स्वरसेनेव भावयेत् ।
 प्रस्थः पिप्पलिचूर्णानाम् प्रस्थयायोरजो भवेत् ॥
 द्वौ प्रस्थौ मधुनाः स्यातां सर्पिषसादकम् भवेत् ।
 शङ्खं रायाय द्वौ प्रस्थौवर्णप्रस्थश्च चित्रकात् ॥

एतत् सन्ध्या सन्धारम् अश्विन इतभाजने ।
 मासमेतवस्थितम् वाचं प्रात्रीयातु यथावत्तम् ॥
 पलं वा द्विपलं वाय लिङ्गात्कथ्यमभुक्तवान् ।
 शतम् जीवति मेधावी बलीपलितवर्जितः ॥
 न चात्र नियमः कश्चित् ज्ञानभोजनमैद्युनि ।
 धन्यम् यश्चस्यमायुष्यम् कल्याणम् मङ्गलम् परम् ।
 विश्वामित्रैश्च आभाषातभूषिभिश्चाभिपूजितम् ॥

16. A FORMULA FOR THREE DIFFERENT GRUELS.

आश्विनीयाम् यवागुल्लयम् ।
 शतपुष्पां साङ्गिं विल्लं पुष्करं चिवकं वचं ।
 बिडं सीवर्चलं चैवं शृङ्गवेरं सपिप्पलीम् ॥
 पलाशकं च लवणं दाडिमं तुल्यं रुनि च ।
 कुसुम्बुद्धमजाजीच समभागानि कारयेत् ॥
 तच्छुलान्धमकी भृष्टान्यवागुं साधयेद्विषक् ।
 कोनिपुलसुदावर्तं मूदकञ्च साधयेत् ॥
 बाबन्ती वातिका रोगाः सर्वानेतान् नियच्छति ।
 एषा यवागुराख्याता अश्विना भिषजां वराविति ॥

17. THE DOCTRINE OF CHEBULIC MYROBALAN
 ACCORDING TO ĀSVINS.

हरितकीकल्पः अश्विनः ।

अथातो हरितकीकल्पं व्याख्यास्यामः ।

सुखोपविष्टं ब्रह्माश्वम् अश्विनौ वाक्चमुचतुः ।

कुतो हरितकी जाता कतियोनिष कीर्षते ॥

रसाय कति संख्याताः कति चोपरसाः कृताः ।

कति नामानि वर्षा वा नास्ति नास्ति च कश्चनम् ॥

कां च रोगाश्चमयते वर्णरूपानि कानि च ।
 केन द्रव्येण संयुक्ता कान् रोगान् शन्नियच्छति ।
 एतं प्रश्नं यथा पृष्टं भगवान् बभूवुर्हसि ।
अग्निर्गोर्ध्वचनम् श्रुत्वा ब्रह्मा वचनमब्रवीत् ॥
 भवद्भ्याम् यदिदं पृष्टमस्य व्याकरणम् पृथक् ।
 प्रवक्ष्याम्यनुपूर्व्वेन पुद्गिरूपकरम् + + ॥
 पपात बिन्दुर्ध्वधिन्याम् शक्रस्य पिवतोऽभ्युत्तम् ।
 औषधिनाम् ततः श्रेष्ठा प्रादुर्भूता हरितकी ॥
 विजया विहता चैव रोहिणी पूतनामृता ।
 जीवन्त्यभया चैव समयोनिर्हरितकी ॥
 अलावुहता विजया या हता सा तु रोहिणी ।
 पूतानास्थिमयी सूक्ष्मा स्थूलमांसफलामृता ॥
 सुवर्णवर्णा जीवन्ती पञ्चाश्री विहता तथा ।
 अभया कालिका लोके निर्दिष्टा ब्रह्मणा पुरा ॥
 एतासां संप्रवक्ष्यामि रसबौध्यं समासतः ।
 हरितकीं पञ्चरसमुष्णामलवर्णां शिवाम् ॥
 गुणो लवणवर्जो यः हरितक्या निरत्ययः ।
 निरहरन्ति मलं यस्मादारोग्यायुष्यसम्प्रताः ॥
 शिवा क्षिप्रसमुत्था च सुपचारा सदाभया ।
 सुखा पुष्टिकरी चैव दरिद्राणां चिकित्सति ॥
 तथैव सुकुमाराणां प्रायक्ते शाश्व ये नराः ।
 अभया हि नृणां धन्या चिकित्सार्थे सदा हिता ॥
 सुसैन्यवां तु यः स्वादेदभयां समद्वीषधाम् ।
 व्यत्यासेन च पिप्यत्यो न व्याधिर्ध्विवहेत तम् ॥
 गुडमिश्रिततीयां तु द्वे द्वे खादित + + ॥
 सहस्रं स समां प्राप्य नराः सर्व्वामयाक्षयेत् ॥
 अभयां सह सुत्रेणैव सुस्नानी लघुभोजनम् ।
 संवत्सरशतं जीवेत् प्रणय विविधान् गदान् ॥
 अरोगो बलसम्पन्नो बलीपलितवर्जितः ।
 ओजीष्करी शरीरे च भवेन्नित्यं निषेविता ॥

अभयाच्च हरिद्राच्च पिप्पल्यः सैन्धवन्तथा ।
कुष्ठं चेति समायुक्तं गोमूत्रेण विरेचनम् ॥
गुडं द्राक्षारसं खीद्रं तथैव च हरितकी ।
एतत् काण्डायनप्रोक्तं पेलिकानां विरेचनम् ॥

पिप्पल्यः सैन्धवं चैव विडङ्गानि हरितकी ।
एतद्गोमूत्रसंयुक्तं सह्रिद्रां विरेचनम् ॥
हरितकीं समगुडं मधुना सह संयुताम् ।
युक्तो वैरेचनी योगः सिद्धं स्याच्च रसायनम् ॥
सर्वरोगान्निहन्त्या पूर्वोक्ता हि हरितकी ।
व्याख्यातम् तक्ष्मासेन विस्तारिणापि मे शृणु ॥
विषमं च सुरानाञ्च विषम् हन्याद्वरीतकी ।
पावकम् वईत्येषा गुणं चासु निगच्छति ॥
हरितकीप्रयोगस्तु जटुरान्यपि नाशयेत् ।
आयुष्य साधयत्येषा कफद्वाराणि शोषिणाम् ॥
कासं त्रासञ्च हृक्कां च तमोमूर्च्छां प्रतानकम् ।
अभयां नातिवर्त्तते चमूमेन्द्रीनिवासुरा ॥
कामलां चैव कुष्ठाञ्च नाशयेत् हरितकी ।
चर्शसां शमनी चैव सर्वमेहविनाशनी ॥
हरितकी प्रयोगाच्च श्रयधुः प्रविदीर्यते ।
उद्धता मरुतेनैव तोयसु + प्रवाहिकाः ॥
श्लेष्मपित्तरक्तपित्ते पाण्डुरोगम् हलीमकं ।
अभया + + + व्याधयस्तथा ॥
श्लेष्मप्रसीकं वैवर्ष्यं स्वरभेदमरोचकम् ।
हृदरोगं चैव मूर्च्छाञ्च हन्याद्देहा हरितकी ॥
यथा वैश्वानरो युक्तो बलवान् वायुना भवेत् ।
तथा वीर्यसमापन्ना गुडेन स्याद्द्वरीतकी ॥

तत्र श्लोकाः ।

युष्माकश्चिदगुडमिश्रितैवा पीता भिषगवाप्येषापि लीढा ।
दुरासदाम् चैव चिरस्थितम् च मदान्नरानामगदम् करोति ॥

न सोऽस्ति रोगो भुवि मानवानाम्, हरितकीयं न जयेत् प्रसह्य ।
 यश्चस्त्रिगोन्तामास्यंतप्रसृतां प्रयोजयेत् सर्व्वत एव धीरः ॥
 हितं हयानाम्, लवणं प्रशस्तं जलं गजानां ज्वलनं गवाश्च ।
 हरितकी श्रेष्ठतमा नराणां चिकित्सा ते पञ्जजयोनिराह इति ॥

हरितकीकल्पः आश्विनः ॥

18. VRHAT GUḌA PIPPALĪ

वृहदगुडपिप्पली ।

विडङ्गं तुषणं हिङ्गु, कुष्ठं लवणपञ्चकं ।
 त्रिचारं फेणकं चव्यं स्त्रेयसी कृष्णजीरकं ।
 तालपुष्पीकं चारं नाश्याः कुष्माण्डकस्य च ।
 अपामार्गोद्भवं चारं चिञ्चायाः चित्तकन्था ।
 एतानि समभागानि पुराणो द्विगुणो गुडः ।
 गुडतुल्यं प्रदातव्यं चूर्णस्यैव कथोद्भवं ।
 मर्दयित्वा दृढे पात्रे मीढकानुपकल्पयेत् ।
 भक्षयेद्दण्डयेन्नित्यं ग्रीहानं हन्ति दुस्तरं ।
 प्रमेहं पान्दुरोगश्च कामलं वज्रिमान्द्रकं ।
 यकृतं पञ्चगुल्यश्च तूदरं सर्व्वरूपकं ।
 जीर्णज्वरं तथा शीथं कासं पञ्चविधक्वाथा +
 अग्निभ्यां निर्दिष्टा ह्ये वा सुवृहदगुडपिप्पली ॥

19. PHALA GHṚTA.

फलघृतम् ।

मस्तिष्ठा मधुकं कुष्ठं विफला शर्करा वचा ।
 अजमोदा हरिद्रे ह्ये हिङ्गु तित्ताकरोहिणी ॥
 काकोली जीरकाकोली मूलं चेष्टाश्वमेधजम् ।
 जीवकर्षभकी मेढी रेणुका हृत्तोदयम् ॥
 उत्पलं चन्दनं द्राक्षा पद्मकं देवदारु च ।
 एभिरेवसमेर्भागैर्घृतप्रस्थं विपाचयेत् ॥

चतुर्गुणेन पयसा विपक्षेऽम्बुनाऽग्निना ।
 एतच्छर्पिर्नरः पीत्वा स्त्रीषु नित्यं वषायते ॥
 पुत्रं जनयते वीरं मेधाश्वं पुष्करेक्षकम् ।
 बन्धा च लभते गर्भं श्यामा वेगात्प्रसूयते ॥
 धा चैव स्थिरगर्भास्याम्बुतापत्या तु या भवेत् ।
 अस्यायुर्जननी चैव या च सूता पुनः स्थिता ॥
 एतदेव कुमार्याणां सर्वाङ्गयज्ञमोक्षकम् ।
 धनं यशस्यमायुष्यं कान्तिस्त्रावस्त्यपुष्टिदम् ॥
 ये च कल्याणकीं प्रोक्तास्ते चापीह गुणाः स्मृताः ।
 ऐतत्फलघृतं नाम स्रग्धिभ्यां परिकीर्तितम् ॥

20. AMṚTĀ GUGGULU.

अमृतागुग्गुलुः ।

प्रस्थमेकं गुडूच्यास्तु चर्द्धप्रस्थश्च गुग्गुलीः ।
 प्रत्येकं त्रिफलायाश्च तत्प्रमाणं विनिर्दिशेत् ॥
 सर्वमेकत्र संक्षुद्य साधयेत् त्वर्धमेऽम्बुसि ।
 पादशेषं परिखाद्य पुनरप्रावधिशयेत् ॥
 तावत् पथेत् कषायन्तु यावत् सान्द्रत्वमागतम्
 दन्तौष्योषविडङ्गानि गुडूचौत्रिफलात्वचः ॥
 ततश्चाढं पलं पूतं गृह्णीयाश्च प्रति प्रति ।
 कर्षन्तु त्रिफलायास्तु सर्वमेकत्र कारयेत् ॥
 तस्मिन् सुसिद्धं विज्ञाय कवौचं प्रक्षिपेद् बुधः ।
 ततश्चाग्निबलं ज्ञात्वा तस्मै माघां प्रदापयेत् ॥
 वातरक्तं तथा कुष्ठं गुहजान्बधिसादनम् ।
 दुष्टव्रणप्रमेहाश्च सामवातं भगवद्भस्म ॥
 नाद्यान्वातत्रयसुन् सर्वमेकत्राव् व्यपोहति ।
 स्रग्धिभ्यां निर्वीरः पूर्वममृतायां हि गुग्गुलुः ।
 चर्द्धप्रस्थं त्रिफलायाः प्रत्येकमिह गृह्यते ॥

21. AMRĀDYA GHṚTA.

अमृताद्यं घृतम् ।

अमृता मधूकं द्राक्षा विफला नागरं बला ।
 वासारग्वधद्वयोर-देवदारुनिकषट्कम् ॥
 कटुका सवरी कृष्णा काशमर्थस्य फलानि च ।
 राज्ञाक्षुरकगन्धर्ध्व-वृद्धदारुघनीतपलैः ॥
 कल्कैरेभिः समैः कृत्वा सर्पिःप्रस्थं विपाचयेत् ।
 धात्रीरससमं दत्त्वा वारिविगुणसंयुतम् ॥
 सम्यक्सिद्धन्तु विज्ञाय भोज्यपाने प्रशस्यते ।
 बहुदोषान्वितं वातं रक्तोन् स ह मुच्छि तम् ।
 उत्तानद्यापि गन्धीरं विकजङ्घोर्ज्जानुजम् ।
 क्रोष्टूशीर्षे मङ्गायूले चामवाते सुदारुणे ॥
 वातरोगोपसृष्टस्य वेदनाद्यापि दुस्तराम् ।
 मूत्रकृच्छसुदावर्त्तं प्रमेहं विषमन्वरम् ॥
 एतान् सर्वाङ्गान् निहन्त्याशु वातपित्तकफोद्भवान् ॥
 सर्वकाक्षोपयोगेन वर्णायुर्व्वलवर्द्धनम् ।
 अन्त्रिभ्यां निर्मितं श्रेष्ठं घृतमेतदनुत्तमम् ॥

22. AMRĀPRĀŚ AVALEHA.

अमृतप्राशवलिहः ।

क्षीरे धात्री च मञ्जिष्ठा क्षीरिणाञ्च तथा रसैः
 पचेत् समैर्घृतं प्रस्थं मधुरैः कर्षसन्निभैः ॥
 द्राक्षा द्विचन्दनीशौरैः शर्करातपलपञ्चकैः ।
 मधुककुसुमान्ता काशमरी टण्डुलसंज्ञकैः ॥
 प्रस्थार्धं मधुनः शीते शर्करार्द्धतुला तथा ।
 पलाङ्गिकाञ्च सञ्चूर्ण्य त्ववेलापन्नकीशरान् ॥
 विनीय तच्च संलिष्ट्यान् मात्रात् नित्यं सुयन्तितः ।
 अमृतप्राशनित्यतदमन्त्रिभ्यां परिकीर्तितम् ॥

चोरमांसाग्निना हनि रक्तपित्तं चतुश्चयम् ।
 दृष्ट्वाश्चिन्नासकासहृदि मूर्च्छाप्रमर्दनम् ॥
 पूवकृच्छ्रज्वरघ्नश्च वल्लभं स्त्रीरतिवर्द्धनम् ॥

23. PUNARNAVĀ GUGGULU.

पुनर्नवागुग्गुलुः ।

अमृतायाश्च क्षिप्रस्थं प्रस्थमेकश्च गुग्गुलीः ।
 प्रत्येकं त्रिफलाप्रस्थं वर्षाभुप्रस्थमेव च ॥
 सर्वमेतच्च संचुय काययेद्बल्लनेऽश्वसि ।
 पुंनः पचेत् पादशेषं यावत् सान्द्रत्वमागतम् ॥
 दन्तीचिवकमूलानां कणाविश्रफलविक्रम ।
 गुहृक्षीत्वन्विडङ्गानां प्रत्येकार्धपलीग्नितम् ॥
 चिह्नाकार्ष्णिकान् सर्वमेकव चूर्णयेत् ।
 सिद्धे चोष्णे क्षिपेत् तत्र अमृतागुग्गुलीः परम् ॥
 यथा चाग्निबलं खादेदस्त्रपित्तौ विशेषतः ।
 वातरक्तं तथा कुष्ठं गुदजान्घ्रिसादनम् ॥
 दुष्टप्रणप्रमेहांश्च सामवातं भगन्दरम् ।
 नाद्याव्यवातं शययुन् हन्यात् सर्वामयानयम् ॥
 अग्निभ्यां निर्मितौ स्त्रीषोऽमृताख्यौ गुग्गुलुः पुराः ।

24. KUṆKUMĀDYA TAILA.

कुङ्कुमाद्यं तैलम् ।

कुङ्कुमं चन्दनं लाक्षा मञ्जिष्ठा मधुयष्टिका ।
 कालीयकस्तुधिरश्च पद्मकं जीलसुतपल्लम् ॥
 न्यसोषपादाः प्रणस्य शुङ्गाः पद्मस्य केशरम् ।
 विपक्षमूलसहितैः कषायैः पलिकैः इत्यक् ॥
 जलादिकं विपक्षम्यं पादशेषमथोद्धरेत् ।
 मञ्जिष्ठा मधुकं लाक्षा पल्लवं मधुयष्टिका ॥

कर्षप्रमाणैरेतैस्तु तैलस्य कुङ्कुमं पथेत् ।
 अजाक्षीरं तद्विगुणं शनैर्बद्धमिना पथेत् ॥
 सम्यक् पक्वं परं च तन्मुखवर्णप्रसादनम् ।
 नीलिकापिङ्गकाव्यङ्गानभ्यङ्गार्द्वं नाशयेत् ॥
 सप्तरात्रप्रयोगेन भवेत् काञ्चनसन्निभम् ।
कुङ्कुमाद्यमिदं तैलमश्विभ्यां निर्मितं पुरा ॥

25. GODHŪMĀDYA GHŪTA.

गोधूमाद्यं घृतम् ।

गोधूमान्तु पलशतं निष्काप्य सलिखाटकी ।
 पादावशेषे पूते च द्रव्याणीमानि दापयेत् ॥
 गोधूमसुष्णातफलं माषा द्राक्षा परूषकम् ।
 काकोली क्षीरकाकोली जीवन्तो सशतावरी ॥
 अश्वगन्धा सखर्जरा मधुकं दूषणं सिता ।
 भङ्गातकं स्वयंगुप्ता समभागानि कारयेत् ॥
 घृतप्रस्थं पचेदधं क्षीरं दत्त्वा चतुर्गुणम् ।
 बद्धमिनाऽथ सिद्धं च द्रव्याण्येतानि निक्षिपेत् ॥
 त्वगेले पिप्पली धान्यं कर्पूरं नागकीसरम् ।
 यथालाभं विनिक्षिप्य सिताक्षीद्रपलाष्टकम् ॥
 दत्त्वे चुदस्तेनाऽऽलोच्य विविधदिनियोजयेत् ।
 शाल्योदनेन भुञ्जीत पिबेन्नांसरसेन वा ॥
 केवलस्य पिवेदस्य पलमात्रं प्रमाणातः ।
 न तस्य लिङ्गशैथिल्यं न च शुक्रक्षयो भवेत् ॥
 बल्यं परं वातहरं शुक्रसंजननं परम् ।
 मूत्रकृच्छ्रप्रशमनं हृद्धानामपि शस्यते ॥
 पलद्वयं तदन्वीयाद्दशरात्रमतन्द्रितः ।
 स्त्रीणां शतं च भजते पीत्वा चानुपिवेत्पथः ।
 अश्विभ्यां निर्मितं येतद्गोधूमाद्यं वसायनम् ॥

26. MAHA-SUGANDHI OIL.

महासुगन्धितेजम् ।

कर्पूराशुबचोचनीलमलिकासासायडोवातकी-
 पुष्पैः समदलेनबाहुसरखायैलेयमासीपुरैः ।
 एकाकुसुमरोचनादमनकत्रीवासजातीफलैः
 कङ्कीलकसुकोजटामदसुराकानाशवज्जामयैः ॥
 तेलोशीरहरैश्चकामखयजस्त्रीवेयचङ्गानखै-
 र्जातीकोमकुशीरपत्रकनतैः स्यूहान्वितैः पालिकैः ।
 लासायोजनवङ्गिखोत्रसखिले तैलं विपाच्याऽऽढकं
 तेनाभ्यज्य तनुं जरन्नपि भवेत्स्त्रीणां परं वज्रमः ॥
 यज्ज्ञाञ्चो सुतिमाननस्यतनयः वण्डोऽपि रस्यसुखो
 बन्धः गर्भवती भवेदपि तथा वृद्धाऽपि सुते सुतम् ।
 कृष्णस्त्रेदविचित्रिं कामयहरं दीर्गन्धकुण्डापह-
 मन्निष्ठां परिकीर्तितं बहुगुणं तैलं सुगन्धं महत् ॥

27. GUDAKUSMĀNDA.

गुडकुशाखम् ।

कुशाखकाप्यकचतं सुस्त्रिप्तं निष्कुलीकृतम् ।
 प्रक्ष्यं च घृततैलस्य ताप्यकचते प्रदापयेत् ॥
 त्वक्पत्रधान्यकव्योवजीरकैलाहयानखम् ।
 वन्यिकं चव्यमातङ्गपिप्पल्यः शङ्खवेरकम् ॥
 शङ्खाटकं कसीरं च प्रखम्बं तालमसकम् ।
 चूर्णीकृतं पलाशं तु गुडस्य तुलया पथैत् ॥
 शीतोभूते पक्षान्धटी मधुनः संप्रदापयेत् ।
 कफपित्तानिलहरं मन्दाग्रीणां च दीपनम् ॥
 कृमिनां हृद्द्वयं श्रेष्ठं बाजीकरचमुत्तमम् ।
 प्रमदासु प्रसक्तानां ये च स्तुः शीघरेतसुः ॥
 चक्षुषं च गृहीतानां परमेतद्विबन्धितम् ।
 कासं वासं ज्वरं हिजां हन्ति च्छर्दिमरीचकम् ॥

कुष्ठकूष्माण्डकां स्नातमग्निर्भां समुदाहृतम् ।

खल्वकूष्माण्डकपार्थं खिल्लकूष्माण्डकद्रवः ॥

KUṢMĀNDAKA RASĀYANA.

कुष्माण्डकरसायनम् ।

वीतत्वगखिल्लकूष्माण्डतुलां खिल्लां पुनः पचेत् ।
 चङ्गयन् सर्पिषः प्रस्थे चैद्रवर्चेऽन च चिपेत् ॥
 खल्वकूष्माण्डकं कषायश्छोदि' पलं जीरकादपि ।
 त्रिजात-धान्य-मरिचं पृथग्धं पलाशकम् ॥
 भवतारितशीते च दत्त्वा चौद्रं घृतार्धकम् ।
 खजेनामथ च स्थाप्य तन्निङ्गन्तुप्रयोजितम् ॥
 कासहिक्काज्वरश्यासरक्तपित्तघतचयात् ।
 उरःसन्धानजननं मेधासृतिबलप्रदम् ।
अग्निर्भां विहितं हृद्यं कूष्माण्डकरसायनम् ॥

28. VEHAṬ NĀRIKELA KHAṆḌA.

ठहमारिकेलखण्डः ।

प्रखल्लु नारिकेलस्य सूक्ष्मं हृदि पेयितम् ।
 निष्कलीकृत कूष्माण्ड खल्वानामर्षमादकम् ।
 तद्वयं मज्जं शिद्ध्यते घृते तु कुक्षीयते ॥
 ततस्तत्र चिपेच्छुभं गीदुग्धसादकीश्रितम् ।
 तत्रैव निःचिपेद्भ्यां सितां प्रखल्लयीश्रितान् ॥
 पचेत् सर्वाणि तैः क्वच सद्गुणा वक्रिणा निषक्तम् ।
 सुपक्वं शीतले तत्र चूर्णीकृत्य विनिःचिपेत् ॥
 सूक्ष्मेखाधानकं घात्री पर्यटल्लदं मज्जम् ।
 उशीरं चन्दनं द्राक्षां शङ्खाटच कशेरुकम् ॥
 लक्ष्मणकं सकर्पूरं कर्षयुष्मं पृथक् पृथक् ।
 सर्वं समिश्रयेद्वेदे भाजने मज्जसि नवे ॥

पलमाद्यनिर्दं प्रातर्भक्षयेद्य यथामलम् ।
 एतन्निषेधितं हन्ति रोगानेताञ्च संशयः ॥
 अक्षपितं ज्वरं पित्तं रक्तपित्तमरीचकम् ।
 वातरक्तं दृषां दाहं पाण्डुरोगश्च कामलाम् ॥
 ज्वरं क्षपयति क्षिप्रं शूलञ्च परिष्कामजम् ।
 गारिकेलस्य खण्डोऽयमन्विष्टा भावितः पुरा ॥
 वर्चोदो हृहृषो हृष्यः पुंसुनिद्रा बलप्रदः ।

29. DĀḌIMĀDYA GHṚTA.

दाड़िमाद्यं घृतम् ।

दाड़िमस्य फलप्रस्थं यवप्रस्थौ तथैव च ।
 कुलत्वंकुण्डवश्चापि क्वाथयित्वा यथाविधि ॥
 तेन पादावशेषेण घृतप्रस्थं विपाचयेत् ।
 चतुःषष्टिपलं क्षीरं क्षीरतुल्यं बरीरसम् ॥
 दत्त्वा बहभिना कल्कैरचमायायुतेः सह ।
 द्राक्षाखण्ड्युरकाकोली-दन्तीदाड़िमजीरकैः ॥
 तथा मेदामहमीदा चिफलादाहरेणुकैः ।
 विशालारजनीदाह-हरिद्राविकषामयैः ॥
 क्षिनिष्ठभूमिकुष्माण्ड-श्लानैलाभिर्भिषम्बरः ।
 पाने भोज्ये प्रदातव्यं सर्व्यर्तुषु च माषया ॥
 प्रमेहान् विंशतिष्वेव सूचाघातांसुधाश्लरोन् ।
 जङ्घं सुदाहणश्चैव हन्यादितद्रसायनम् ॥
 शूलमष्टविधं हन्ति ज्वरमष्टविधं तथा ।
 कामला पाण्डुरोगाश्च हृल्लोमकमषाहन्ति ॥
 श्लोपदण्ड विशेषेण घृतेनानेन नश्यति ।
 शूलमायुष्मजोऽस्य सर्वरोगहरं परम् ।
 दाड़िमाद्यनिर्दं नाम अक्षिभ्यां निमित्तं जहत् ॥

30. ŚATĀVARI GHṚTA.

शतावरीघृतम् ।

शतावरीमूलशतं द्विद्रोणेऽपां विपाचयेत् ।
 अष्टभागावशेषेण घृतप्रस्थं विपाचयेत् ॥
 जीवनीयानि सर्वाणि राक्ता गोक्षुरकं तथा ।
 शतपुष्पा वचा कृष्टं सरलं सपुनर्नवम् ॥
 चन्दनं तगरं मांसी पद्मकं रक्तचन्दनम् ।
 सुरसं नागरं कृष्णं बिडं नागरमुत्पलम् ॥
 एभिरक्षसमेर्मागेः क्षीरं दद्यात्क्षतगुणम् ।
 हृंहृत्वं वातपित्तघ्नं क्षतशोषज्वरापहम् ॥
 पङ्कजां पृष्ठसर्पिणामर्दितानां च शस्यते ॥
 पुंस्त्रीपक्षातिनां नृणां वन्ध्यानां चैव योजितम् ॥
 बलवर्धकं ह्येतदलक्ष्मीप्रं प्रजाकरम् ।
 शतावरीघृतमिदमन्विभ्यां परिकीर्तितम् ॥

31. HINGVĀDYA POWDER.

हिंगव्यायं चूर्णम् ।

हिरण्यम्यिकाधान्यकाम्रिकवचाचव्याघ्रिपाठाः सठी
 इच्छाक्षं लवणवयं चिकटुकं चारुयं दाडिमम् ।
 पथ्यापुष्करवेतसाक्षरपुषाजाम्ब्याजगन्धैः कृतं
 चूर्णं भावितमेतदाद्रंकरसे स्याद्बीजपूरस्य च ॥
 आधानयक्ष्णीविकारगुदजान् शुष्णागुदावतंसान्
 प्रत्याधानगरीदराश्मरिदजक्ष्णीद्वयारीचकान् ।
 ऊरुक्षन्धमतिघ्नं च मग्न्यो वाधिर्वमठीलिकां
 प्रत्यठोलिकाया सङ्घापहरति प्राक्क्षीतस्तुब्धान्मुना ॥
 दह्युच्चिबहुचकटीजठरान्तरि
 वक्षिस्तांसफल्ग्वैषु च पार्श्वयोष ।
 शूलानि नाशयति वातबलाक्षिजानि
 हिरण्यव्यायमायमिदमाङ्गिरसं हितायाम् ॥

32. DASHĀNGA OIL.

दशाङ्गतेलम् ।

शेरियकोऽवतलता वाजिगन्धा शतावरी ।
 प्रसारणी नामवला अर्द्धा सपुनर्गवा ॥
 बला चेति समान् भागान् राक्षारससमन्वितान् ।
 विश्राय दीपप्रकृतिं कषायमुपकल्पयेत् ॥
 तेन पाद्मावशेषेण तिलतेलाढकं पचेत् ।
 दधिमस्त्रिचुनिर्यासयुक्तलाघोदकैः समैः ॥
 चतुर्गुणेन पयसा कल्कं रेभिर्पलोन्मितेः ।
 मांसीशताह्वामधुकमस्त्रिष्ठारक्तचन्दनेः ॥
 शतावरीदेवदारुकोन्मीत्वक्पत्रवारिजेः ।
 कुष्ठामरवचायुक्तेष्वैलं सिद्धं प्रदापयेत् ॥
 बली पाने तथाऽभ्यङ्गे नखे च परिषेचने ।
 सर्वरोगान् जयत्येतत्संस्मृतान् मातरिचना ॥
 विमेषतो ह्यपक्कारमुष्मादं वातशोथितम् ।
 स्त्रीचामपत्यजननं पुंसां चातिबलप्रदम् ॥
 गराणां नङ्गदानां च सूक्ष्माणां वाक्प्रवर्तनम् ।
 मेधाजननमायुष्यं बलवर्ध्याप्रिवर्धनम् ॥
 सर्वघृह्णं विवर्जित् सन्निपातहरं परम् ।
 दशाङ्गमिति विख्यातमग्निम्भां परिकीर्तितम् ॥

33. VĀHAT AGNIMUKHA POWDER.

वहदग्निमुखं चूर्णम् ।

हो चारी चिचकं पाठा गिहङ्गं लवङ्गानि च ।
 मूकोला तमरं भार्गी कारवी हिङ्गु पीप्लरम् ॥
 सठी दावी विङ्गुमुष्ठा तथा चिन्द्रवचासाया ।
 चावीजीरकहृषाकश्रेयसः सोपकुचिषाः ॥

अश्वेतसमझीका दाडिमं सकटुत्रयम् ।
 भल्लातकाजमोदं च यवान्नी सुरदारु च ॥
 अभयाऽतिविषा चव्या हृषुषारग्वधस्तथा ।
 तिलमुष्ककशिरूणां कोकिलाक्षपलाशयोः ॥
 चाराण्यमूनि तुल्यानि सूक्ष्मचूर्णानि कारयेत् ।
 लोहकिङ्कं च सप्ताहं तप्तं गोमूवसेचितम् ॥
 विहान्सुभावितं कृत्वा योगेऽस्मिन्प्रक्षिपेत्ततः ।
 मातुलुङ्गरसेनैव भावयेत्तु दिनत्रयम् ॥
 दिनत्रयं तु शुक्तेन तथाऽऽर्द्रकरसेन च ।
 सुभावितं ततः कृत्वा भक्तमध्ये प्रयोजयेत् ॥
 एषोऽग्निकल्पचूर्णस्तु नाशयत्यचिराद्भदान् ।
 अजीर्णकं तथाऽऽनाहं पञ्च गुल्मान् सुदुस्तराम् ॥
 यक्ष्णीपाण्डुरोगांश्च श्वासकासांश्च दारुणाम् ।
 अपक्वां तथोन्मादं विभ्रमं च मदात्ययम् ॥
 प्रणदत्युल्लणानेतान्नष्टमग्निं च दीपयेत् ।
 समस्तव्यञ्जनोपेतं भक्तं कृत्वा तु भोजने ॥
 प्रदद्यादस्य चूर्णस्य विडालपदकं भिषक् ।
 ततस्तद्व्रतां याति कोणत्यं च प्रपद्यते ॥
 एतदग्निमुखं चूर्णं चूर्णराजी निगद्यते ।
ब्रह्मणा निर्मितं ह्येतदश्विभ्यां परिकीर्तितम् ॥

३४. CITRAKA-HARITAKĪ AVALEHA.

चित्रकहरितक्यवलेहः ।

चित्रककषायपलशतमसृताधावीरसं च तुल्यांशम् ।
 संमिश्रा गुडशतं च हि द्विपञ्चमूलोकषायेण ॥
 तनुल्येन हरीतक्याढकमेकं विपाच्य गुडपाकम् ।
 अर्धप्रस्थं मधुनस्तस्मिन्दत्त्वा ततोऽन्येद्युः ॥
 हे हे पले निदध्यादेलात्कपवत्रिकटुकानाम् ।
 सयवक्षारार्धपलं यथाग्निं पश्यात्प्रयुञ्जीत ॥

एतद्रसायनीत्तममन्त्रिभ्यामग्निहृदये प्रोक्तम् ।

उपयुक्तवतां पुंसामपि काष्ठदण्डानि जीर्यन्ति ॥

अर्शःश्वासभगन्दरकासकृमिशोफकुष्ठगुल्माश्च ।

मासहयोपयोगादेहिनाशयत्वन्वह्निसपि ॥

रोगानीकसमेतं विशेषतो हन्ति राजयन्माषम् ।

अजितमपि भेषजशतैः पीनसरोगं चान्नाम्नयति ॥

35. HARITAKĪ AVALEHA.

(This formula has been quoted in page 110.)

HARITAKĪ AVALEHA II.

द्वितीयश्चित्रकहरीतक्यवलीहः ।

चित्रकपलशतमभिनवमाहृत्य कषायमेव कुर्वीत ।

धात्रीरसस्य पलशतममृतायाः स्वरसमेव तत्तुल्यम् ॥

दशमूलस्य पलशतमष्टाविंशतया जलद्रोणे ।

अभयाढकं च भिषजा साध्यं पृते कषायेऽस्मिन् ॥

शुद्धगुडस्य शतं स्याद्रसेन चालोड्य सपदि तद्वैव ।

अभयाश्च ताः समस्ता मृदुना ज्वलनेन मार्दवं नेयाः ॥

मधुनः पलानि षोडश तस्मिन्देयानि शीतलीभूते ।

त्वक्पत्रमरिचकेसरमागधिकैलापले हे स्युः ॥

यवञ्चारपलैकमेतन्प्राश्याग्निमात्रया विद्वान् ।

जरयति दण्डकाष्ठान्यपि विसप्तदिवसोपयोगेन ॥

कासश्वासभगन्दरकुष्ठान्यष्टादशोदराण्यष्टौ ।

मासोपयोगादेतत्क्षतक्षयं हन्ति राजयन्माषम् ॥१२८॥

षण्डोऽप्यषण्डतां च याति वर्षमात्रोपयोगेन ।

सुरलीकरोगनिचयप्रशमनकरणैकलक्ष्यमाहृत्यै ॥

दिव्यं रसायनमिदं कृतवन्तावञ्चिनी देवी ।

36. CITRAKA AVALEHA.

चित्रकावलीङ्गः ।

बन्निहिपञ्चमूलस्य काये पलशतद्वये ॥

चन्दताया * रसस्यैके पूतेऽस्मिन्नभयाशतम् ।

पचेद्भुत्तुलां तावद्यावदापाकलक्षणम् ॥

अन्येद्युक्तं मधुनः सुशीते कुडवद्वयम् ।

प्रक्षिपेन्निःसृगन्धस्य त्रिकटोश्च पलद्वयम् ॥

प्रत्येकं स्यादवचारः शुक्तिस्तस्मिन्वसायने ।

उत्तमं कथितं पुंसामश्विभ्यामग्निद्वये ॥

जीर्यन्त्यपि च काष्ठानि कासश्वासचयकृमौन् ।

गुल्मीदरार्शःकुष्ठं च जयेच्छोषं भगन्दरम् ॥

योगशतेरप्यजितं द्राह्माज्जयति पीनसम् ।

37. SVALPA KADALĪKANDA GHṚTA.

स्वल्पकदलीकन्दघृतं ।

कदलीकन्दं निर्यासे तत्प्रसूनं तुलां पचेत् ।

तेन पादावशेषेण वस्त्रपुतेन यवतः ॥

लवङ्गं कदलीं देवकाष्ठं मधुरिकान्तथा ।

रजनीं चविकाजाजीं नागरं त्रिफला कथा ॥

दाडिमस्य च बीजानि यमानी धान्यकान्तथा ।

वृक्षाम्ने भकषाद्राक्षसिन्धूवसमन्वितैः ॥

कल्कैरक्षसमैरेभिर्घृतप्रस्थं विपाचयेत् ।

पानभोज्ये प्रदातव्यं सर्वत्र घृतमाचया ॥

प्रमेहान् विंशतिश्चैव दाहं शोषं कृषा क्षया ।

विवर्द्धनाहशूलघ्नं कामलाञ्जरनाशनं ॥

वातरोगं निहन्त्याश्च वृक्षमिन्द्राग्निर्यथा ।

कदलीकन्दकं नाम अश्विभ्यां निम्नितः पुरा ॥४८॥

38. AYOPATI RASA.

अयःपतिरसः ।

त्रिवृता सर्वभागानि सर्वं सर्वं च शर्करा ॥
उष्णोदकानुपानेन इच्छामिदौ रसः श्रुतः ।
अयःपतिरसो नाम अश्विनीदेवनिर्मितम् ॥

39. MĀRTANDA RASA.

मार्तण्डरसः ।

बहुमूत्रहृत् चैव तिलपिष्टेन संयुतम् ॥
मार्जालयन्त्रिरोगाणां गुल्मचौमरिचं तथा ।
यक्रतद्विस्तम्भमूलमिच्छुरस्वरसं तथा ॥
आरुचौ आर्द्रकं चैव जीरकं चूर्णसंयुतम् ।
पेरङ्गी व्याधिमूलिन अपत्यं हितमेव च ॥
भरुशीचणकाज्येन सर्वरोगो व्यपोहति ।
मार्तण्डरसनामायमश्विनीदेवनिर्मितः ॥

40. VĀLA SŪRYYODAYA.

वालसूर्योदयः ।

मणिराजसूतं नागं वैगन्धरसं समम् ।
स्वर्णप्रभं गन्धकार्धं तदर्धं करवीरकम् ॥
सु कुसुमद्रावैः कुमारौरसमेव च ।
जम्बीरास्त्रं न प्रत्येकं मर्दितं च दिने दिने ॥
सूत्रायां निक्षिपेत्सर्वं बालुकायन्त्रपाचितम् ।
गुञ्जामात्रप्रयोगेण विंशतिर्मेहकुष्ठकम् ॥
मूत्रकृक्काणि सर्वाणि द्वादशं चयमेव च ।

* * *

वालसूर्योदय नाम अश्विनीदेवनिर्मितम् ॥

CHAPTER IV

KAŚYAPA

Kaśyapa's father was the sage Maricī and his mother Kalā. He married the seventeen daughters of Dakṣa, and became the progenitor of all living beings :

Name of wife.	Sons.
1. Aḍiti	Devas (Gods)
2. Diti	Daityas (Asuras)
3. Danu	Dānavas (Demons)
4. Kāśṭhā	Aśvas (Horses)
5. Ariṣṭā	Gandharvas
6. Surasā	Rākṣasās
7. Ilā	Vṛkṣa (Trees)
8. Muni	Apsarās
9. Krodhavaśā	Sarpas (Snakes)
10. Tāmṛā	Syena, Gṛdhra (Falcons)
11. Surabhi	Go-Mahiṣas (Cows)
12. Saramā	Śvāpadās (Dogs)
13. Timi	Jādos (Fishes)
14. Vinatā	{ Garuḍa { Aruna (Sun)
15. Kadru	Nāgās (Serpents)
16. Pataṅgi	Pataṅgas (Insects)
17. Jāmini	Śalabhās (Locusts).

Kaśyapa is the name of an ancient physician who was present in the meeting of the sages mentioned in Caraka Saṁhitā I. i. In IV. vi, Kaśyapa appears to have solved the problem in relation to the part formed first in a foetus. He said: "All parts of the foetus are formed

simultaneously and the development of the parts are interdependent.”

कश्यपः सर्वाङ्गनिर्वृत्तिरिति । तदुपपन्नं सर्वाङ्गानां तुल्यकालाभिनिर्वृत्तत्वात् हृदयप्रभृतीनाम् । सर्वाङ्गानां ह्यस्य हृदयं मूलमधिष्ठानञ्च केषाञ्चिद्भावानां न च तस्मात् पूर्वाभिनिर्वृत्तिरिषान्तस्याहृदय प्रवृत्ताणां सर्वाङ्गानां तुल्यकालातिनिवृत्तिः सर्वाभावा ह्यन्योन्यप्रतिबन्धास्तस्माद् यथाभूतं दर्शनं ।

In *Aṣṭāṅga Hṛdaya Saṁhitā* VI. ii, he is called *Vṛddha Kāśyapa* or *Kāśyapa* the old, and therein a formula is ascribed to him as a remedy against children's diseases caused by teething. Similarly in VI. iii, a formula of his is quoted as a remedy against “*Vālagraha*” or “demoniacal seizure of children.” From these facts, it becomes apparent that *Kāśyapa* was a specialist in pediatrics. Again in the *Bower Ms.*, there is a formula to give relief to children suffering from gravel, stone, strangury and morbid secretion of urine. This is also ascribed to him.

Hoernle thinks *Kāśyapa* and *Kāśyapa* are the names of the same ṛshi ; but in *Caraka Saṁhitā*, I. i. both the sages are separately mentioned and we find *Kāśyapa* quoted in *Caraka Saṁhitā*, IV. vi and *Aṣṭāṅga Hṛdaya Saṁhitā*, VI. ii and VI. iii (see footnote) *Bower Ms.*, p. 170).

Formulae : The following formulae are ascribed to *Kāśyapa*.

1.

समङ्गा-धातकी-लोघ्न-कुटन्नट-बलाह्यैः ।

महासङ्गा-क्षुद्रसङ्गा-क्षुद्रबिल्वशलाटुभिः ॥

सकार्पासोफलैस्त्रयी साधितैः साधितं घृतम् ।

• चौरमस्तुयुतं हन्ति शीघ्रं दन्तोद्भवो वान् ।

• विविधानामयानेतद् बृहत्कश्यपनिर्मितम् ॥

2. DAŚĀṆGA DHUPA.

दशाङ्ग धूपम् ।

वचा-ङ्गि-विडङ्गानि सैन्धवं गजपिप्पली ।

पाठा प्रतिविषा व्योषं दशाङ्ग कश्यपोदितः ॥

Ibid, VI, iii, p. 29, v. 46.

This formula is another recension of Dasāṅgamagada, quoted on page 185 and ascribed to Kāśyapa in the Bower Ms.

KĀŚYAPA, THE ELDER

Kāśyapa is the name of an ancient physician. He is the son of Kaśyapa and is the founder of the clan (गोत्र) which still bears his name. According to Trikāṇḍaśeṣa, Kāśyapa is the name of sage Kaṇḍa, the founder of the atomic theory. In the Caraka Saṁhitā I. i, his name appears in the list of sages who were desirous of learning the medical science.

विघ्नभता यदा रोगाः प्रादुर्भूताः शरीरिणाम् ।

तपोपवासाध्ययनव्रतचर्यव्रतायुषाम् ॥

तदा भूतेष्वनुक्रोशं पुरस्कृत्य महर्षयः ।

समंताः पुण्यकर्माणः पार्श्वं हिमवतः शुभे ॥

अङ्गिरा जमदग्निश्च वशिष्ठः काश्यपो भृगुः ।

अविधी गीतसः साङ्गाः पुलस्त्यो नारदीऽसितः ॥

अगस्त्यो वामदेवश्च मार्कण्डेयान्धलायनौ ।

पारिचिर्भिच्छुरावेयो भरद्वाजः कपिल्ललः ॥

त्रिश्वात्मिचाश्वरथ्यौ च भार्गवश्चवनीऽभिमित् ।

गार्ग्यः शण्डिल्यकौष्ठिल्यौ वाल्किर्देवलगात्रवौ ॥

साङ्गृत्यो वैजवापिश्च कुशिको वादरायणः ।

वडिशः ऊरलोमा च काप्यकात्यायनावुभौ ॥

काङ्कायनः कैकशेयो धौप्यो मारीचिकश्यपौ ।

शर्कराक्षी हिरण्यक्षो लोकाचः पेङ्गिरेव च ॥

शीनकः शाकुनेयश्च मैवेयो मैमतायनिः ।

वैखानसा वालखिल्यास्तथा चान्ते महर्षयः ॥

In I. xii he is again referred to as holding a discussion with the other sages on the qualities of Vāyu and as having

put forward the view that Soma is the real cause of health and disease by its action on the phlegm of the body. The healthy and the diseased conditions are : Firmness and laxity, growth and leanness, activity and idleness, virility and impotence, knowledge and ignorance, etc.

तच्छ्रुत्वा मारौचिवचः काश्यप उवाच । सोम एव शरीरे श्लेष्मान्तर्गतः
कुपिताकुपितः शुभाशुभानि करोति । तद्यथा—दाह्यं शैथिल्यमुपचय काश्यं सुखाह-
मालस्यं वृषतां क्लीवतां ज्ञानमज्ञानं बुद्धिं मोहमेवादीनि चापराणि हन्दादीनीति ।

He is quoted in the Nivandha Saṁgraha, Vyākhyā Kusumāvalī, Vākhyā Madhukoṣa, and the Bower Ms.

KĀŚYAPA IN NIVANDHA SAṂGRAHA.

1. न शिरा-स्नायु-सन्वास्थिमर्म्हस्वपि कथञ्चन ।
दंशंस्थोत्कर्तनं कार्यं दाहोवा भिषजाऽग्निना ॥
2. अरजस्कां यदा नारीं श्लेष्मरेता ब्रजिहती ।
अन्यसक्ता भवेत् प्रीतिर्जयिते कुम्भिलसदेति ॥

KĀŚYAPA IN VĀKHYĀ KUSUMĀVALĪ.

1. नाघीयति न त्राप्यर्धमाहारो न च पच्यते ।
स कोष्ठस्थोऽलसौभूतस्तेन सोऽलसकः स्मृतः ।
यदि वाऽलसके दोषाश्चूर्णीतीसारवर्जिताः ।
कारकास्तीव्रशूलादेः स्तितसः सन्निरोधकाः ।
तिथ्यग्यान्तस्तनुं सत्त्वां दण्डवत्सम्भयन्ति चेत् ।
स दण्डालसकस्याज्यः शीघ्रं देह विघातकृत् ॥
2. विडङ्गव्योषपूतीकवराहंश्चाग्निभिः पचेत् ।
कार्षिकैः सर्पिषः प्रस्थं द्विचौरं चतुरस्थं च ।
तत्पानाच्छास्त्रकासघ्नं शीघ्रदुर्णान्गुल्मनृत् ॥

Vṛddha Kāśyapa

3. See 2, Ni. S.
4. दण्डस्यान्वासनं दत्तं न सम्यक् परिपच्यत ।

KĀŚYAPA IN VĀKHYĀ MADHUKOṢA.

1. संयोगजश्च द्विविधं तृतीयं विषमुच्यते ।

गरः स्यादविषस्तत्र सविधं कृत्रिमं मतम् ॥

Vṛddha Kāśyapa.

KĀŚYAPA IN BOWER MS., vv. 1010-1040.

1. मुहुस्तु गुडिकामेकां कुमाराय प्रदापयेत् ।

2. अतिसारिषु बालानां गुडिकां दापयेद्विषक् ॥
तण्डुलोदकसंयुक्तां क्षौद्रेण सह दापयेत् ।
परुषकरसेर्युक्तं शर्कराक्षौद्रसंयुताम् ॥

3. कर्द्वयानस्य बालस्य गुडिकां दापयेद्विषक् ।
गङ्गुचिरसंयुक्तां शर्कराक्षौद्रसंयुताम् ॥
अथवा पक्कलोष्ठस्य प्रसादेन प्रदापयेत् ।
शर्कराक्षौद्रसंयुक्तां तथा सम्पादयेत् सुखी ।

4. रक्तातिसारी बालानां गुडिकां दापयेद्विषक् ।
पञ्चवल्ककषायेण तण्डुलानाम् रसेन वा ॥
शर्कराक्षौद्रसंयुक्तां शशस्य रुधिरिण वा ।
ऐण्येयहरिणाभ्यां वा रक्तेर्मधुमिश्रितैः ॥

5. उदावर्त्तेषु बालानां गुडिकां दापयेद्विषक् ।
गुडोदकेन संयुक्तां त्रिफलाया रसेन वा ॥

6. आम्रातिसारी बालानां गुडिकां दापयेद्विषक् ।
दधिमण्डनं संयुक्तां तिलिङ्गिकारमेन वा ॥

7. शर्करा चाग्रसरी चैव मूत्रग्राहे प्रमेहिषु ।
गुडिकां दापयेद्द्वयो मधनाय प्रसन्नया ॥
आसवेन मुजातिन बालानां दापयेद्विषक् ।
सुखं भवति तेनास्य काश्यपस्य वचो यथा ॥

तेन कोष्ठागतो जन्तुः क्षिप्रमेव प्रसृज्यते ।
 शिरोरोगेषु श्मनं वमनं चैव शाम्यति ॥
 क्षिमिर्गदगतो यस्या गुड़िकाया प्रलीपयेत् ।
 तेनास्य सोऽप्यं भवति काश्यपस्य वचो यथा ॥

8. अविज्ञातेषु रोगेषु गुड़िकां दापयेद्भिषक् ।
 सुखोदकेन संयुक्तां सर्वरोगविनाशनीम् ॥
 समीप्य कुशलो वेदाः कुर्वीत विविधां क्रियाः ।
 बलावलच्च बालानामृतं कालं समीप्य च ॥
 क्रियां पचविधां वदो धात्रीणामुपपादयेत् ।
 विरेकम् वमनं चैव तथेवाप्यनुवासनं ॥
9. परिकर्त्तिकासु बालानां गुड़िकां दापयेद्भिषक् ।
 वराहविष्ठा संयुक्तान्तथा तण्डुलधावनैः ॥
 शर्कराचौद्रसंयुक्तां पाययीत चिकित्सकः ।
 सुखी भवति तां पीत्वा काश्यपस्य वचो यथा ॥
10. ह्रिकाश्वासेषु कासेषु गुड़िकां दापयेद्भिषक् ।
 मातुलुङ्गेन संयुक्तां गन्धसौवर्धलेन वा ॥
11. जन्तुभिर्वध्यमानस्य गुड़िकां दापयेद्भिषक् ।
 दाडिमोदकसंयुक्तां मधुनाथ प्रसन्नया ॥
 यथा शिरोविरेकस्य लङ्गाप्रव्यञ्जनानि च ।
 भूयतां भोजनं चेषा यवागुर्लघुभोजनम् ॥
12. कामलापाण्डुरोगेषु श्वयथनां तथैव च ।
 युक्तां पिलुकषायणं गुड़िकां दापयेद्भिषक् ॥
13. रोहिण्यां तालुग्रोषे वा गलगण्डोपजिह्विके ।
 क्षुण्णिताम् गुड़िकां दद्याद् मांसं च पीयेत् ॥
 सुखेन दन्ता जायन्ते श्वयथ, श्रोत्रशाम्यति ।
 तेनास्य रोगाः शाम्यन्ते आरोग्यं चाधिगच्छति ॥

14. दद्रुकुष्ठकिलासानां पामाश्रय विचर्चिके ।
 त्वग्गतेषु च रोगेषु गुड़िकां दापयेद्विषक् ।
 कम्पित्याच चूर्णानि चूर्णानि गुड़िकायाश्च ।
 पिष्टा सर्षपतैलेन तेजेऽमनुरूपयेत् ॥
 गोमूत्रेण सुखोष्णेन खदिरैर्न रसेन वा ।
 सेच्य निम्बकषायेण तेन सम्पद्यते सुखी ॥
15. छाया वा पृतना वापि यच्च वायुपरिग्रहः ।
 वस्तून्मूत्रेण संयोज्य गुड़िकां तस्य दापयेत् ॥
 अथवा कल्कपिष्टायां गुड़िकायां प्रलेपयेत् ।
 तथा सर्व्वग्रहाकस्य प्रशामयन्ति सुदारुणाः ॥
16. पान्त्रंशुलेषु बालानां गुड़िकां दापयेद्विषक् ।
 कुलत्परसंयुक्तां युक्तं मांसरसेन वा ॥
 धात्र्याः यद्वृक्षरीरायाः दोषाः शाम्यन्ति दारुणाः ।
 बालं वर्षश्च बालाणां चिप्रं समुपजायते ॥
 काश्यपिया गुड़िका ॥

The following formulæ are attributed to Kāśyapa :—

1. Dasāṅgamagada :—

वचाहृङ्गविडङ्गानि सैन्धवं गजपिप्पली ।
 पाठा प्रतिविषा व्योषं काश्यपेन विनिर्मितं ॥
 दशाङ्गमगदं पीत्वा सर्व्वकौटविषं जयेत् ॥

2. Traiphala Ghṛta.—C.D.—p. 310.

वैफलं घृतम्—

त्रिफला दूषणं द्राक्षा मधुकं कटुरोहिणी ।
 प्रपौष्करीकं सूक्ष्मा विडङ्गं नागकेशरम् ॥
 मौलोत्पलं शारिवं चै चन्दनं रजनोदयम् ।
 कार्ष्णिकैः पयसा तुल्यं त्रिगुणं त्रिफलारसम् ॥

घृतप्रस्थं पचेदेतत् सर्व्वेनेव रुजापहम् ।
 तिमिरं दोषमास्त्रावं कामलाकाचमर्ज्जुदम् ॥
 वीसर्पं प्रदरं कण्डुं रक्तं श्रयथुमेव च ।
 खालित्यं पलितञ्चैव केशानां पतनं तथा ।
 विषमज्वरमर्माणि शुक्रच्छाशु व्यपोहति ॥
 अन्ये च वरुवो रोगा नेवजा ये च वर्ज्जजाः ।
 तान् सर्व्वान् नाशयत्याशु भास्करस्तिमिरं यथा ।
 न चेवास्त्रात् परं किञ्चिद्विभिः काश्यपादिभिः ।
 दृष्टिप्रसादनं दृष्टं यथा स्यात् वैफलं घृतम् ॥

Books :—

1. Kāśyapa Tantra : This work is quoted in Nivandha Saṁgraha, vi-xxvii. काश्यपादितन्त्रान्तरोक्ताधिकसंख्या निराकरणार्थं । But there is no Ms. of the book known to scholars.

2. In G.O.M.L., Vol. xxiii, No. 13112, we find a manuscript described as No. 13112. काश्यपौययोगनिदानम्.

KĀŚYAPĪYAROGANIDĀNAM.

Incomplete.

Gives the varieties and the distinguishing characteristics of different maladies, the method of diagnosing them and also the remedial medicines. The work is attributed to Kāśyapa.

Beginning:

दिशतिज्ञे अनिदानम्—

पित्तरक्तं च शीतं च श्लेष्मण्यं च श्लेष्मकम् ।
 श्लेष्मं दुर्गन्धं जिह्वसूलकम् ॥
 कासश्चेष्मं पार्श्वशीघ्रम् ओष्ठारं श्लेष्मिकं विषा ।
 दीर्घश्चेष्मं सान्द्रश्चेष्मं तनुश्चेष्मं च पूर्व्वकम् ॥

* * * * *

पितृश्रे ऋनिदानम्—

पितृवर्णं श्रे ऋषं.....यन्यिरूपकम् ।

इदं कण्ठयूलं च पितृश्रे ऋष्य लक्षणम् ॥

* * * * *

Colophon :

इति विंशतिश्रे ऋनिदानं संपूर्णम् ।

End :

शङ्खद्रावं शिवक्तायं सचेरोगेषु योजयेत् ।

कुष्टमष्टादशं चैव लेपमात्रेण नश्यति ।

दुष्टव्रणानि गौर्वाणि...मावाभिशास्यते ।

श्रुवानिविविधानं च (?) अनुपानविशेषणम् ।

सर्दरोगविनिर्मुक्तः काश्यपस्यभिषितम् ॥

Books :

Kāśyapa Samhitā: A work called by this name and apparently ascribed to Kāśyapa is noted in Burnell Catalogue of Tanjore Mss. In Aufrecht's Catalogues Catalogorum, p. 88, the same Ms. is called Kaśyapa Samhitā.

काश्यपरुद्धिता Kāśyapa Samhitā: Ms. : Burnell Catalogue of Tanjore Mss., No. XLI, p. 70.

Beginning :

केलासशिखरे रम्ये पार्वतीपरमेश्वरी ।

अन्योन्यमुखलीलायां एकान्ते सुखगोष्ठिषु ॥

पार्वती पतिं आलीक्य कृताञ्जलि रभाषत ।

दैवेश जगदाधार सर्वभूतमयात्मक ॥

मम प्राणेश नाथाय सर्वलोकजगद्गुरो ।

भूतं भविष्यत् कर्माऽपि त्वयाधीनम् च सर्वशः ॥

तव प्रसादच्छाद्दार्ढ्यं वेदसारम् श्रुतम् मया ।

कचिद् दिव्यम् ममाऽकाङ्क्षा श्रोतुम् इच्छामि शङ्कर ॥

“Siva then gives an account of diseases and their causes and cure. Sin (pāpa) is the cause, and therefore (as might be supposed) the treatment is much mixed up with religious observances. The diseases are classified very minutely, *e.g.*, 20 kinds of kuṣṭa, 12 of gulma, etc.”

SOMA

In the R̥gveda Soma is the juice of a milky climbing plant (*Asclepias acida*) extracted and fermented to form a beverage, liked by the gods and priests. There are many hymns (Ninth maṇḍala) devoted to its manufacture and praise. Gradually Soma was deified as a god, powerful, capable of healing diseases, and bestower of worldly fortunes. Latterly, Soma became a synonym of the moon (latest hymns of R̥gveda; and Atharva Veda), which was hence called Oṣadhī-pati or Lord of herbs; and Soma became the guardian of the healing herbs.

The Soma or moon plant is said to be produced on the Mujavat mountain (Rv. x. 34).

The juice is described as sweet (ix, 62, 21), honied (ix 63, 3, 16), pungent, flavoured and exhilarating (vi. 47, 1, 2). It stimulates voice and calls forth ideas (*ibid*, 3). In viii, 48, 3, it is said to confer immortality. In x. 44, 4, the juice is said to nourish the body.

The plant has been identified as *Acido Asclepias*. Some consider it to be *Semitia Genia*, while others think it to be *Sarcostema Viminalis*. But the Vedic plant is still unknown.

It is said to have been brought by a falcon (i, 80, 2; ii, 43, 7; ix, 48, 3; 62, 4), or by a bird or Suparnā to Indra (viii, 89, 8; ix, 48, 4) from the sky (iv, 26, 6) or from a mountain (i, 93, 6; iii, 48, 2; v, 43, 4; ix, 18, 1; 62, 4; 85, 10; 98, 9) where Varuṇa had placed it (v, 85, 2), or by the daughter of the Sun from the place where the rain-god Parjanya, the father of Soma (ix, 62, 3) nourished it when it was taken by the Gandharvas (ix, 113,

3; S. P. Br., iii, 4, 3, 13; vi, 2, 2-18; ix, 3, 18; Tait. S., vi, 1, 6, 1, 5). In the Atharva Veda xix, 6, 16, he is said to have sprung from Puruṣa. A Gandharva is said to be its protector (ix, 83, 4; 85, 12) Vibhāvasu by name, who robbed Gāyatrī when she was carrying Soma from sky for the Devas. (S. P. Br., iii, 2, 4, 1, ff.) From him the gods bought King Soma in exchange of Vach who transformed herself into a female (Ait. Br., i, 27). She was allowed to come back on account of her good songs.¹

The manufacture of the Soma juice is thus described :—

The Soma plants are pressed by the stones and the juice flows through the woolen strainer into the wooden vats, in which it is finally offered as a beverage to the gods on a litter of grass. The stones used in pounding the shoots on a skin “chew him on the hide of a cow.” It is purified by ten maidens, *i.e.*, ten fingers.² A more detailed and complete account of the preparation of the Soma juice by fermentation is described in Hillebrandt's *Vedische Mythologie*, Vol. I, according to methods given in the Vedic texts. The Soma-oblations are directed to be made thrice daily : to Agni in the morning, to Indra at mid-day and to the R̥bhus at evening.

Properties ascribed to Soma juice :—

“The juice of the plant is said to be an immortal draught (i, 84, 4) which the gods love (ix, 85, 2; 109, 15) to be medicine for a sick man (viii, 61, 17). All the gods drink of it (ix, 109, 15). The god who is its personification is said to clothe whatever is naked, and to heal whatever is sick; through him the blind sees, and the lame walks abroad (viii, 68, 2; x, 25, 11). He is the

¹ Taitt. Br., vi. 1. 6. 5.

² *Ibid.*

guardian of men's bodies, and occupies their every member (viii, 48, 9)."¹

"The exhilarating and invigorating action of Soma led to its being regarded as a divine drink that bestows everlasting life. Hence it is called *amṛita*, the "immortal" draught (allied to the Greek *ambrosia*). Soma is the stimulant which conferred immortality upon the gods. Soma also places his worshipper in the imperishable world where there is eternal light and glory, making him immortal where King Yama dwells. Thus Soma naturally has medicinal power also. It is medicine for a sick man, and the god Soma heals whatever is sick, making the blind to see and the lame to walk." "A comparison of the *Avesta* with the *Rigveda* shows clearly that soma was already an important feature in the mythology cult of the Indo-Iranian age. In both it is described as growing on the mountains, whence it is brought by birds; in both it is king of plants; in both a medicine bestowing long life and removing death. In both the sap was pressed and mixed with milk; in both its mythical home is heaven, whence it comes down to earth; in both the draught has become a mighty god; in both the celestial Soma is distinguished from the terrestrial, the god from the beverage. The similarity goes so far that Soma and Haoma have even some individual epithets in common."² Thus the deification of the intoxicating Soma must have taken place at a date earlier than the composition of the Vedas themselves.

Max Müller says: "Haoma tree might remind us of the tree of life, considering that Haoma, as well as the Indian Soma, was supposed to give immortality to those who drank its juice."³

¹ Muir's Sanskrit Texts, Vol. V, p. 265.

² Macdonell's Sanskrit Literature, pp. 98-100.

Chips from German Workshop Vol. I.

M. Blavatsky remarks : " Plainly speaking Soma is the fruit of the tree of knowledge forbidden by the zealous Elohim to Adam and Eve or Yahir lest man should become as one of us " ¹

Divine powers : He is Asura, or divine (ix, 73, 1 ; 74, 7) and the soul of sacrifice (ix, 2, 10 ; 6, 8). He is immortal (i, 43, 9), confers immortality on gods and men (i, 91, 1, 6. 18 ; viii, 48, 3 ; ix, 106, 8 ; 108, 3 ; 109, 3) and gives felicity in heaven (ix, 113, 7, 8).

Relations to gods : Soma exhilarates Varuna, Mitra, Indra, Viṣṇu, the Maruts, the other gods, Heaven and Earth (ix, 90, 5 ; 97, 42). The Ādityas are strengthened by him and the earth made vast (x, 85, 2). Both gods and men resort to him, as his juice is sweet (viii, 48, 1). He is the friend of Indra (iv, 28, 1, 2 ; ix, 76, 2 ; 85, 3), rides in his chariot (ix, 87, 9 ; 103, 5), and helps him in his conflicts with Vṛtra (ix, 61, 22), whom he is said to have slain (i, 95, 5 ; ix, 24, 6 ; 25, 3, 9 ; 28, 3).

He is Prajāpati, lord of creatures (ix, 5, 9 ; 62, 14), the creator and father of gods (ix, 42, 4 ; 86, 10 ; 87, 12 ; 109, 4), the generator of hymns, of Daus, of Prithivi, of Agni, of Sūrya, of Indra, and of Viṣṇu (ix, 96, 5). He created Sun (vi, 44, 23 ; ix, 61, 16 ; 97, 41 ; 107, 7 ; 110, 3) and so dispelled darkness (i, 91, 22 ; vi, 39, 3 ; ix, 66, 24). He stretched out the atmosphere (i, 91, 22 ; vi 47, 3f), and with the fathers, the sky and the earth (viii, 48, 13), which they sustain and keep apart (vi, 44, 24 ; 47, 5 ; ix, 87, 2 ; 89, 6 ; 109, 6). He produced the two divine worlds (ix, 98, 9). He is king of gods and men (ix, 97, 24), and is elevated over all beings like sun (ix, 54, 3) ; and he holds in his hand all creatures (ix, 89, 6) whom he guards (x, 25, 6). His laws

¹ Secret Doctrine, Vol. II.

are like those of king Varuna (i, 91, 3 ; ix, 88, 8) and he is prayed to be gracious to those who violate them (viii, 48, 9 ; x, 25, 3). He is thousand-eyed (ix, 60, 1, 7) and hurls the sinners into abyss (ix, 73, 8). He is formidable, heroic, bountiful and always victorious (ix, 66, 16). He conquers cows, chariots, horses, gold, heaven and water for his votaries. He is a wise ṛṣi (viii, 68, 1), strong, skilful, omniscient, prolific and glorious (i, 91, 2). He is the priest of gods, leader of poets, a ṛṣi among sages, a bull among animals, a falcon among kites, and an axe in the woods¹ (ix, 96, 6). He protects men from enemies (i, 91, 21 ; x, 25, 7). His votaries neither suffer (i, 91, 8) nor die against his wish (i, 91, 6). He is prayed to prolong lives (viii 48, 7), and not to abandon the worshipper to death (x, 59, 4). His friendship is eagerly desired (ix, 66, 18). He rejoices in the society of waters (x, 30, 5, 6 ; 36, 8).

His wives: King Soma married the thirty three daughters of Prajāpati ; but he was partial to Rohini only. All the sisters went to their father. Soma promised to treat them equally. They came back ; but he broke his promise and was seized with consumption (Taitt. Sam., ii, 3, 5) as a punishment. In the Taitt. Br., ii, 3, 10, 1 ff., Śraddhā is said to be his favourite wife. For this, Sitā Savitri complained against him to her father. Prajāpati prepared for her a sweet smelling paste. Sitā was painted with it on her forehead. Soma invited her and gave her the three Vedas which he had in his hand when she asked them as a gift.

In the Purāṇas, he is said to be the son of Atri and Anusūyā ; and he is also said to have been produced in the churning of the ocean. But in the R̥gveda, Parjanya, the rain-god, is described as his father and the waters as his

¹ Muir: Sanskrit Texts, Vol. V, pp. 258-270.

sisters (Rv ix, 82, 3; 98, 9; x, 34, 1). He married the twenty seven daughters of Dakṣa, who are really the personifications of the twenty seven lunar asterisms (Yajurveda). Rohini was his favourite, and so Dakṣa cursed him to be childless and consumptive. His wives out of pity, interceded with their father for him; and he modified the curse that the decay should be periodical and not permanent. This story explains the wane and increase of the moon. In the Upaniṣads and Brāhmaṇas, he is said to be drunk up by the gods and so the moon wanes.

He carried off Tārā, the wife of Brhaspati; and so a quarrel arose. Brahmā interposed and compelled Soma to restore Tārā to her husband. Tārā gave birth to a child, whom she truthfully declared to be the son of Soma. The son was called Budha and he was the progenitor of the lunar race.

His vāhana: He has winged mares of his own, a team like Vāyu (ix, 86, 37; 88, 3) in speed. He also harnesses the horses of the Sun (ix, 63, 9).

Arms: He is armed with thousand-pointed shafts, (ix, 83, 5; 86, 40) which he grasps in his hand (ix, 76, 2). His arms are sharp and terrible (ix, 61, 30) and his bow swift-darting (ix, 90, 3), with which he destroys his foes and overthrows cities (ix, 61, 2; 88, 4). He often takes the place of other Vedic gods, Indra, Varuna and other deities. He is said to have killed Vṛtra.

Many European scholars regard that the references to the Moon as Soma are only to be found in the more modern hymns, and in earlier hymns Soma always refers to the plant or its juice. Thus the 85th hymn of the tenth maṇḍala is a later hymn according to Roth (Nirukta, p. 147) and Weber. So are i, 19, 18; v, 18, 19. The examples cited by Yāska in his Nirukta regarding the use of Soma in the sense of the Moon are collected from portions of the Veda, which are distinctly styled as "later." But even

in the hymns which are accepted by scholars as "earlier," Soma refers to a god who lives in heaven :

Gods live in heaven (viii, 13, 2 ; 69, 3). There Soma lives. His adorable, (ix, 86, 15) feet are in heaven (ix, 79, 14). He was brought to earth from heaven by a falcon (iv, 26, 6). He makes a sign when he comes down (ix, 64, 8). Placed midway between heaven and earth, he goes all round (ix, 70, 5). May his thousand rays come to earth, (ix, 71, 5). He travels in the sky like a bull (ix, 71, 3). Sūrya protects the abode of Soma, who protects the children of Devas (ix, 83, 4). He causes the stars to shine (ix, 85, 9). He is the upholder of, and is shed from, heaven (ix, 76, 1).

The honey-tongued Veṇa milked Soma in heaven (ix, 85, 10). The Veṇas (the Venus or Sukra—see Tilak's Orion, pp. 261-5) pray Soma, the moving child in the sky, (ix, 85, 11). The boy, with Sukra shine through the splendour of the Sun, (i, 86, 4 ; 94, 1, 2 ; 96, 24 ; ix, 46, 4 ; 85, 12). (Here Soma or the Moon is called a baby as the Moon of second to the fourth day of Suklapakṣa, *i. e.* the fortnight of the moon's increase, can possibly join with Sukra). Soma goes to Devas (ix, 86, 7). Clad in shining clothes Soma crosses the sky (ix, 85, 14). Soma is the fleetest of all moving bodies ;—travels like air and Sun (ix, 88, 3), moves alone (ix, 97, 6) towards the East in a car fastened by the Sun's rays, (ix, 11, 1, 3), faster than the speed of the waters, the planets in the sky and the speech (ix, 84, 12), like a fiery horse (ix, 96, 15) on a wide (ix, 12, 8) path curved like a bow (ix, 21, 1 ; 24, 2, 3) and fixed by law (ix, 86, 33), whence Soma sends his rays (ix, 90, 4).

Soma the Tigmaśṛṅga has two yellow horns like those of the Moon (ix, 5, 2 ; 15, 4 ; 70, 7 ; 87, 7 ; 97, 7), and increases gradually (ix, 97, 9) in the sky (ix, 97, 40, 44) and thus pleases the gods (ix, 97, 39) by swelling out like

water (ix, 17, 4; 27, 6; 107, 12). Similarly the Sun, Agni and Indra are said to have possessed sharp horns (i, 163, 9; ii, 140, 6; vi, 16, 39; vii, 19, 1; viii, 60, 13). Soma is surrounded (ix, 86, 32) and polished (ix, 76, 4) by the sun's rays. Soma enters into the Sun's rays (= Kalāṣa) (ix, 86, 9; 99, 33), and comes out of it again (ix, 25, 6; 71, 2; 79, 9). Kalāṣa is mentioned in ix, 43, 3; 62, 19; 63, 13, 23). By Kalāṣa, Yāksa understands कलाशेरते ऋक्षिन्: the receptacle of Soma. Kalāṣa is also the abode of Mitra Deva (ix, 12, 35; 86, 11; 92, 6; 96, 23). On the Amāvaśyā (the day of the new moon) and Pratipada (the first day of the moon's increase) the moon is not visible and so is represented as entering into Kalāṣa (ix, 71, 9; 97, 33). On the second day the new moon is visible and is thus described as a baby. A place in the sky, near the Sun where the Moon is not visible is the Kalāṣa of the Moon. See Hillebrandt's *Vedische Mythologie*, I, pp. 463-6 and 467. The fact that the moon shines by the reflected rays of the sun was well known to the Vedic Indians, (ix, 25, 6; 71, 2, 9; 76, 4; 86, 32), *Ibid.*, pp. 467-8. See Thibaut: *Astronomie Astrologies und Mathematics*, p. 6.

Soma by his rays causes day (Tithi) (ix, 92, 5), and also measures day (ix, 86, 45). Soma "lights up dark nights and is the day's banner" (vi, 39, 3). The ancient R̥ is used to celebrate pious acts on auspicious days marked by Soma (ix, 6, 11), and thus Soma is said to have helped sacrifices (ix, 97, 12). Through Soma our forefathers knew their ways (ix, 97, 39). Soma makes the nights, days and years resplendent and the Devas fixed him as the cause of days in ancient times (vi, 69, 3). Soma, by prayer, outstrips the enemies; like a reined horse he does good (ix, 96, 15). Soma points out the ways (ix, 70, 9). He kills the impious (ix, 73, 8); he is the king of day (ix, 73, 30). Soma

knows the way (iii, 1, 62, 13 ; ix, 65, 13 ; 101, 10 ; 104, 5, 9 ; 106, 6 ; 107, 7). The world is managed by Soma, (ix, 96, 30). He is the king of the world and shows the ways to sacrifices (ix, 96, 10 ; 4, 66).

In the following hymns Soma is apparently used in the double sense of the Moon and juice of soma plant
ix. 15, 4 : He, shaking his horns, does heroic deeds.

5 : He hastens with bright golden beams.

6 : Passing through the seive, he comes down into the vessels.

7 : He is prepared in the pails.

8 : Ten fingers and prayers prepare the intoxicating one.

x. 85, 2 : Soma in the centre of the stars.

3 : He who drinks juice of plant regards it as Soma and so no one drinks the real Soma-juice.

4 : Soma hears the sound of crushing stones, but no earthly beings taste thee.

5 : When gods drink thee, thou increasest again. Vāyu is the guardian of Soma.

97, 19, 22 : Soma is the king of medicinal plants.

We find that in many hymns as in ix, 37 and ix, 70, the poet refers to the moon and the plant in the same hymns. In the Atharva Veda, Soma often refers to the moon, and in Yajurveda the lunar mansions are said to be his wives. In the post-vedic works Soma regularly means the moon. The two Brāhmaṇas of the R̥gveda deal largely of Soma sacrifices in which the fermented juice of the Soma plant is used in worshipping the celestial Soma or the moon.

Av., xi, 6, 7. May Soma whom they call moon, free me.

Sp. Br., i, 6, 4, 5

• xi, 1, 3, 2

1, 3, 4, 5

1, 4, 4

} The king Soma, who is the Moon, is the food of the gods.

i, 6, 3, 24 : Moon has the nature of Soma.

v. 3, 3, 12 }
ix. 4, 3, 16 } Soma is the King of Brāhmaṇas.

xii, 1, 1, 2 : Soma is the Moon.

Viṣṇu Purāṇa : Bk. 1, Ch. 22 : Brahmā made Soma to be king of stars and plants.

There are no doubt many hymns that point to the Soma plant but the descriptive terms used may, by analogy, be applied to Moon. "The purifying seive" of 'sheep's tail' may metaphorically refer to the "seive-like wool cloud" (Hopkins). Hillebrandt declares that Soma always means the moon; but his arguments still leave it a matter for discussion whether in the R̥gveda the Soma is everywhere addressed to the Moon or the plant. The lunar interpretation of Soma is incompatible with the statements in ix, 97, 41 and *ib*, 37, 4 that Soma "produced the light in the Sun" and "makes the Sun rise." Hopkins rather inclines to identify Soma with Indra and cites many hymns to substantiate his theory. But his arguments are not conclusive;—they depend on a few hymns and cannot explain the others. He thinks that the Soma cult is even older than the Vedic Indra, as several Indo-Iranian epithets of Soma and Haoma such as Vṛtraghan, Verethraja, etc. refer to a period when the Soma cult was observed, by the Indians and the Persians alike.

Soma is identified with lightning in Rv. ix, 47, 3.

But in x, 85, 3 and 4, the lunar theory is expressed in the Veda in unmistakable language :

3. "Men think that they drink Soma when the Soma plant is pressed. But the true Soma as known to priests, no one gets as a drink."

4. O Soma! The priests conceal you. You hear the sound of stones but no one in this earth gets you as a drink.

Thus in the hymns to Soma we have the Soma-cult as worship of the moon, but this is concealed by the priests by the more popular worship of the Soma drink from the plant. In modern times we know of similar practices resorted to by the priests: The Panca Makāra, the Five "M"'s Cult has a deep, hidden and esoteric meaning to the priests and at the same time, it forms the basis by the popular cult of revolting Tantric worship, analogous to Dionysiac rites.

Soma is sometimes invoked with other gods: Indra, Agni, Rudra, Vāyu and Puṣān

Soma and Agni (i, 93, 1 ff): the two gods placed the luminaries in the sky (i, 93, 5)

Soma and Puṣān (ii, 40, 1 ff): Generators of wealth, and of heaven and earth, guardian of the world and centre of immortality.

One lives in sky (4); he produced all the worlds (5) The other lives on the earth and atmosphere (4) and beholds all things (5)

Soma and Indra: iv, 28: vi, 72: Prayer to dispel darkness; to destroy revilers; to bring sun and light; to support sky and to spread out the earth.

vii, 104, 1, 8: Prayer to punish Rākhasas, Yatudhānas, &c.

Soma and Rudra: vi. 74: they are armed with sharp weapons: and prayed for blessings to man and beasts, for healing remedies, and for deliverance from sin.

Atharva Veda: vii, 42, : O Soma and Rudra, drive away the disease that has entered our house-hold.

2: Do ye put all remedies in our bodies.

Soma and Vāyu: v, 52, 11: We pray Vāyu and Soma, the protector of the world.

Soma is supposed to preside over medicinal plants, and is also called Vanaspati, or "lord of forest." In the R̥gveda 1.22 we find the sage Medhātithi declaring his knowledge of the power of water as a remedial agent, as derived from Soma.

"Soma has declared to me 'all medicaments as well as Agni, the benefactor of the universe, are in the waters'—the waters contain all healing herbs.

"Water bring to perfection all disease,—dispelling medicaments for (the good of) my body, that I may long behold the sun.

"Waters take away whatever sin has been (found) in me, whether I have (knowingly) done wrong or have pronounced imprecations (against holy men), or (have spoken) untruth.

"I have this day entered into the waters: we have mingled with their essence."

Wilson's Trans. Vol. I, p. 57.

In another hymn i. 91 :

"Thou, Soma, fond of praise, the lord of plants, art life to us." *Ibid.* p. 234.

And again i. 120 :

"Be unto us, Soma, bestower of wealth, the remover of disease, exulting Soma! increase with all twining plants."

Ibid. p. 324.

In the R̥gveda the following hymns treat of the Soma :

In most of the hymns to Indra, Soma is described as the friend of Indra. All the gods depend on Soma for immortality, and Soma juice is praised in the hymns addressed to other gods. So Soma is mentioned in many hymns of the different māṇḍalas.

- Rv. I, 91, 1—23 : Originator and protector of plants.
 93, 1—12 : Prayer to Agni and Soma.
- II, 30, 6 : Prayer to Indra and Soma.
 40, : Prayer to Soma and Puṣā.
- III, 62, 13 : Soma knows the way.
 14 : May Soma bring boiled rice free from
 disease germ for the biped and
 quadruped animals.
 15 : May Soma sit in the sacrificial altars
 after prolonging our life and con-
 quering our enemies.
- IV, 28. : Prayer to Indra and Soma.
- V, 51, 12 : Prayer to Vāyu and Soma who is the
 protector of the world.
- VI, 47, 1-5 : Somastimulates speech, causes pleasure,
 displays solar splendour and upholds
 the sky.
 51, 14 : Prayer to kill Paṇi.
 52, 3 : Prayer to hurl weapon against the
 enemies.
 72. : Prayer to Indra and Soma.
 74. : Prayer to Rudra and Soma to cure
 contagious diseases.
 75, 18 : May Soma protect you with Amṛta.
- VII, 35, 7 : May Soma be peaceful to us.
 41, 1 : Pray Soma and Rudra in the morning.
 104, 1-7 : Prayer to Indra and Soma.
 25 : Sweet adorable Soma.
- VIII, 48, 3 : O Amṛta Soma! we will drink you
 and become immortal.
 4 : Prayer to prolong our life.

5: Prayer for protection from loss of character and diseases.

7: Prayer to prolong life.

9: Soma is the protector of our body.

10: Prayer to Soma to prevent indigestion.
May Soma remain in our stomach forever.

11: May the incurable diseases disappear.
These diseases becoming severe
make us tremble. Soma when
drunk prolongs life.

12: Soma when drunk enters into our heart.

72-17: Soma is the medicine for the sick.

79-1 : Soma is the conqueror of the world, is a
plant and a R̥ṣi.

2: He clothes what is naked and cures
the sick; the blind sees and the lame
walks.

IX: The whole of the ninth maṇḍala teems with descriptions of the preparations of the plant Soma. The apparatus used in the manufacture of Soma juice: filters, vessels, furnace etc., are mentioned; and this maṇḍala contains perhaps the earliest account of a pharmaceutical preparation—the Soma juice.

X, 17, 11-14: Prayer to Soma juice.

25, 11: Rescues the blind and the lame from
their defects.

36, 4: May the Stones drive away the demons.

- 8 : Soma juice mixes with water.
- 44, 4 : Soma juice nourishes the body.
- 76, : Prayer to the stones which crush the Soma plant.
- X. 85, 1 : Soma is in the sky.
- 2 : Soma has made this earth spacious ;
Soma is placed near the stars.
- 3 : Men think that they drink Soma juice
by pressing the Soma plant. But
the true Soma, as known to the
poets, no one can drink.
- 4 : The poets have concealed Soma. You
hear the sounds of stone but no
one on the earth can drink Soma.
- 5 : When Soma is drunk, it increases
instead of loss. Vāyu protects
Soma, as year is sustained by
months.
- 19 : Candra distributes long life.
- 94, 1, 14 : Description of the preparation of Soma
juice.
94. } Prayer to the stones for pressing
175. } Soma.

Formulae attributed to Chandra :—

1. Candraprabhāgutikā : It was obtained by Candra through Sambhu's kindness—R.C. ix, p. 86. This formula has been quoted in pages 58-9.

BUDHA.

The "Wise, or intelligent." He is the planet Mercury, son of Soma, the moon, by Rohini, or by Tara. the wife of Vṛhaspati, the Lord of prayer. He married Ilā, the daughter of the Manu Vaivasvata, and by her had a son, Pururavās, a god among men, who loved Urvaśī, that paragon of the Apsārasas (Harivamśa 88-11). Budha was the author of a hymn in the Ṛgveda. For an account of his birth see Soma.

Books :

1. Sarvasāra : Budha, the son of Candra (Moon), is said in the Bramhavaivarta Purāṇa, to have written a work on medicine called the "Epitome of all sciences." ¹
2. He is said to have been well-versed in science and is said to be the first author on veterinary science and to have written a scientific treatise on elephants.

End of Vol. I.

¹ See foot-note 1, p. 7.

Opinions

(1)

("The Surgical Instruments of the Hindus, with a comparative study of the surgical instruments of the Greek, Roman, Arab and the modern European Surgeons." By Dr. Girindra Nath Mukhopadhyaya, B.A., M.D., Fellow of the Calcutta University.)

Last year the University of Calcutta published the book, which is in the form of two stout volumes of 700 pages, as the Griffith Prize Essay for 1909. Originally Dr. Mukerjee read three papers on the Surgical Instruments of the Hindus before the Asiatic Society of Bengal in June, July and August, 1908. The learned President in his annual address remarked as follows: "In the course of the last session Dr. Girindra Nath Mukerjee submitted to the Society a paper of considerable extent, in which he elaborately examined the subject of the Surgical instruments of the ancient Hindus. The question he has raised, as to the priority of Hindu medicine over that of the Greeks, the Romans and the Arabs, are likely to arouse controversy, but in whatever way the question of priority may be decided, it seems to me truly remarkable that the descriptions given in our most ancient books on medicine, of the surgical instruments then in use should bear a close resemblance to the descriptions given not only in Greek, Roman and Arab medical writings but in many cases with the descriptions given in modern works on Surgery. I trust that this subject, so peculiarly Indian will not be left alone and will receive the attention from investigators which it undoubtedly deserves." (J. A. S. B., Vol. V, 1909). In 1909, the paper was amplified and submitted as a thesis for the Griffith Prize for 1909, and it was successful in gaining highest commendation.

The book represents many years of laborious investigations—a work of real research and erudition. It is undoubtedly the most important work upon this subject which has yet been written in the English language. It is full of interesting informations and is a valuable contribution to the history of Medical Science. Dr. Mukerjee is a pioneer in this field of research. It is of course impossible in a short notice to give an adequate account of a scientific work devoted to a special study, but his discovery that the Surgical instruments in use in Europe, were only modifications of those used by our Surgeons in ancient days is no doubt startling. The book is exhaustive, original and informing and it reflects the utmost credit on the industry, learning and research of its author. From many neglected, forgotten and unexpected corners, he has accumulated a mass of materials and compiled a systematic account of the instruments used by the Hindu Surgeons, about 3000 years ago. A field of study which is unknown to many is here made accessible to all by the labour of an Indian. It has the advantage of being written by one, who is not only a noted Surgeon of Calcutta but is also a profound Sanskrit scholar. This year he has contributed

another important work "Notices, Biographical and Bibliographical, of the Indian Physicians and their works on Medicine" for which the Griffith Prize for 1911 is awarded to him. Sir Asutosh Mookerjee in his last Convocation address, mentions it as a notable contribution "on the History and Critical Estimate of the work of Ancient Indian writers on Medicine."

No brief analysis of Dr. Mukerjee's work is possible. The work is divided into nine chapters, in which he describes each instrument by its Sanskrit name with a comparative study of similar instruments from the Surgical catalogues of other nations. Besides, there is a learned preface, and a carefully-prepared index of Sanskrit and English words. The book is of extraordinary interest to those who would make an impartial study of the Surgery of the Hindus. The foot-notes contain the Sanskrit originals, the source of Dr. Mookerjee's descriptions of the instruments. The subject of ancient Indian medical literature has been little noticed by the European scholars. The contributions from Wilson, Wise, Jolly, Cordier, Hoernle are no doubt important but their works cannot compare with the present in the amount of original research and complete mastery of the subject. Dr. Mukerjee quotes with becoming gratitude the help he had derived from his predecessors in this field of research. One is impressed as he advances through this valuable work that the author has spared no pains to make the work useful and instructive.

Dr. Mukerjee has enriched his highly original book with numerous illustrations in the second volume. The artistic merit of the plates render the work well worthy of the high reputation of the author.

The book is admirably written and nicely printed. The University of Calcutta deserves high praise for the publication of such a standard work. From every standpoint it is a publication of which the University may be proud. As a book of reference the book will be found invaluable and Dr. Mukerjee is to be congratulated on the result of his labour.

Bengalee.

(2)

(Extract from the *Englishman* of 18th September, 1914.)

SURGICAL INSTRUMENTS OF THE HINDUS, by GIRINDRA NATH MUKHOPADHYAYA, B.A. M.D.

This work describes the numerous instruments used by the ancient Hindus for surgical purposes. The author has also decided the priority of Hindu medicine and surgical instruments over those of the Greeks, the Romans and the Arabs. The "*Garbha-sanku*" (foetus or traction hook) was used for extracting a dead foetus after perforating its head by the "*Mandalagra*." The Hindu surgeons recommended the extraction of the living foetus by manual traction, the hand being recommended by more modern writers on Hindu surgery for extracting the child alive. *Susruta* directed the use of the "*Sarpa fana*" or snake-hook for the extraction of stone. The illustrations of the various instruments mentioned add to the interest of the work. The author is to be congratulated on the success of his enterprise.

(3)

DOVER, ENGLAND,

October 8

DEAR MOOKERJEE,

Your books reached me safely last month and I have been much interested in reading them, though just now it is difficult to think of anything but the war, which is going on just across the water in front of me. All the more it is pleasant to be taken back to old times and to thoughts of the Medical College and its students.

I have to thank you very much therefore for your books and also for your friendly letter of 12th May.

Your sincerely,

G. BOMFORD.

(4)

To Dr. Girindranāth Mukhopādhyāyā, B.A., Fellow of the Calcutta University, McLeod Gold Medalist in Surgery, Formerly Lecturer on Surgery, Calcutta Medical School and College of Physicians and Surgeons (Bengal), Member of the Asiatic Society of Bengal, Life Member and Professor of Botany, Indian Association for the Cultivation of Science, Examiner, Calcutta University.

DEAR SIR,

I regret to say that I am disqualified for appreciating the two volumes which you have kindly sent me, as they ought to be appreciated, because I am completely ignorant of Surgery. So much I can, at any rate, say, that the results of your investigations have been a revelation to me. I had, until I read them, no idea of the high level, which the ancient Indians had attained in the surgical treatment of diseases. I cannot even now pretend to be in a position to decide whether the Greeks borrowed from the Indians, or the Indians from the Greeks. With all my predispositions in favour of Greek science, I must confess that, as far as I can see at present, the Indians must have attained as high a level as the Greeks. And here I cannot refrain from complementing you on the wideness of your reading. You seem to be as familiar with Hippocrates and Celsus, as with Sushruta and Charaka. I used to possess a copy of Celsus, and of some work of Hippocrates, but I now remember but a few words of each author.

I suppose that surgical science has made great advances in Europe during my own lifetime. The use of anaesthetics which does not seem to have been thoroughly known to the ancient Indians, and the sterilising of surgical instruments must have conferred great benefits on the human race. When I was a boy, I used to hear a great deal about cupping and other processes which you describe, and even knew something about the habits of leeches. It is possible that these therapeutic agencies are much used now, without my knowing anything about them, and it is probable that my *naïve* confessions will raise a smile on your countenance.

Whatever may have been the case with surgery, I cannot help thinking that medical science must have been in a very imperfect condition when our Charles II died. Macaulay mentions some of the loathsome remedies which were administered to him. And yet the Roman Catholic physician who attended him was a man "whose skill was then widely renowned." It is interesting to reflect that at this time Sydenham was alive. I do not know if he was called in.

We have all read how Lady Mary Wortley Montagu introduced into England the Turkish custom of inoculation for small-pox. Do you think that the Turks borrowed it from India? I should not be surprised to hear that they did.

But I am wandering from my subject and perhaps getting a little out of my depth.

I used to wonder a little at the interest which Dr. Hoernle and other able men took in ancient Indian medicine. But Dr. Hoernle's *Osteology* opened my eyes a little, and your disquisitions have enabled me to form a wider acquaintance with the whole subject. I am glad to find that in your concluding chapter you show that Europe is permanently indebted to India for the use of certain simples and the performance of certain surgical operations. In this way your native land has contributed her quota to the physical well-being of the human race, and you are justly proud of the fact.

In any case, a perusal of your two volumes must convince any unprejudiced reader that the development of the healing art in India must always occupy an important place in the history of civilisation. We hear a great deal of "culture" now-a-days, and it does not always wear a beneficent aspect. But peace has her victories as well as war, and it is evident that the humane achievements of the Indian disciples of Aesculapius can no longer be ignored. It is a pleasant reflection that henceforth the medicine and surgery of the East will be allied in harmonious conjunction with the same sciences as cultivated in the West, and the happiest results may be expected from their sisterly rivalry.

I am sorry to say that I have detected a good many misprints in your first volume both in the text and in the notes.

On the other hand the plates in your second volume seem to me admirable.

I must send this to the care of the Registrar, as I fear that I have misplaced your letter.

I remain,

Yours very truly,

CHARLES H. TAWNEY.

(5)

PRESIDENCY COLLEGE,
Calcutta, the 4th August, 1914.

DEAR DR. MUKHOPADHYAYA,

I have been going through your "*Surgical Instruments of the Hindus*" with interest and admiration. In the preface of my "*History of Hindu Chemistry*" I wrote with regret that "a comprehensive history of Hindu Medicine has yet to be written." You have at any rate contributed a valuable chapter towards it. No one could have done greater justice to the subject. The author of such a work should combine in him a thorough knowledge of modern surgery, the critical method of the West, and a vast acquaintance with the Sanskrit medical

literature. It is scarcely necessary to add that in you one can readily recognise a rare and harmonious combination of all these requisite qualities. With congratulations on the completion of your labour of love.

I remain,
Yours sincerely,
P. C. RAY.

P. S.

I am afraid you scarcely do justice to the Buddhists when you ascribe the decadence of Hindu surgery, partially at any rate, to the teachings of the "Blessed One." You should remember that the redaction of Susruta, such as we now meet with is due to Nágárjuna as Dalvan the Commentator calls him "अतिमार्क" etc. The causes of decadence have been hinted at in the chapter entitled "Decline of Scientific Spirit" in my "Hindu Chemistry."

(6)

From the Regius Professor of Medicine, Oxford.

29, August, 1914.

DEAR SIR,

Many thanks for your volumes, which it is most kind of you to have sent. I shall be particularly interested in the one relating to the history of Indian surgery. I shall also be greatly interested in your book on Abscess of the Liver, a disease of which we had a good many instances at the Johns Hopkins Hospital, and Councilman and Lafleur's monograph was written from my department.

Prof. Hoernle here will be most interested in your historical studies. I will let him see a copy of your work at once.

Sincerely yours,
WILLIAM OSLER.

(7)

NARIKELDANGA, CALCUTTA,
19th November, 1915.

DEAR DR. MUKHOPADHYAYA,

Pray pardon me for the delay that has occurred in my acknowledging with thanks the receipt of your kind present of the two volumes of your elaborate work on "The Surgical Instruments of the Hindus." It evinces varied learning, diligent research, and admirable skill in methodical arrangement, and it will rank as a valuable contribution to Indian medical literature.

Your other work, "Tropical Abscess of the Liver," a copy of which also you have so kindly presented to me, is a highly technical treatise, of which I am not competent to say anything more than this, that it is a model of patient and thorough investigation in search of truth.

With best regards,

I remain,

Yours sincerely,

GOOROO DASS BANERJEE.

(8)

RATHFARNHAM, CAMBERLEY, SURREY.

2-11-14.

DEAR SIR,

Last June you wrote to me that you were kindly sending me a copy of your work on "The Surgical Instruments of the Hindus," and in the following August I wrote to you that the book had not yet arrived. Some time ago, long after I wrote to you, I received the promised volumes through the Calcutta University. I was ill at the time, and after my recovery had to go away from home, so that there has been considerable delay in acknowledging the receipt of the book and in thanking you for it. I have read it with great interest, and with full appreciation for the learning exhibited by you in its preparation. Indian medicine and surgery are subjects that I have never studied, and hence any remarks in detail concerning your work would be of no value, and I must content myself with a layman's general admiration for the historical labours of an expert who is evidently a master of the matter with which he deals.

Yours faithfully,

GEORGE A. GRIERSON.

